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MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

EDITED BY

ALEXANDER FLEMING, M.D., AND W. T. GAIRDNER, M.D.

FEBRUARY TO DECEMBER

1848.

WITH TWO LITHOGRAPHIC PLATES AND SEVERAL WOODCUTS.

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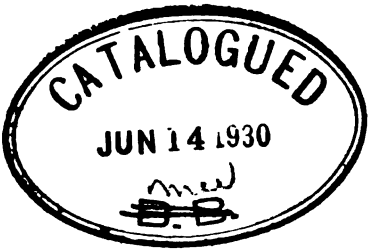

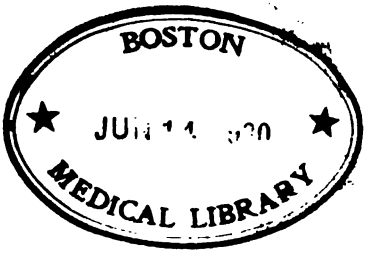

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VOL. I. FEBRUARY 1848. No. I.

I.—MEDICAL PHYSICS, CHEMISTRY, AND NATURAL HISTORY.

ARTICLE 1.—*On the Elasticity and Cohesion of the Principal Tissues of the Human Body.* By M. G. WERTHEIM.—M. Wertheim, who has already published numerous determinations of the elasticity of inorganic substances, has now extended his experiments to the animal tissues. These experiments were made by loading a strip of the substance to be examined, of known length and diameter of section, with increasing weights, and measuring the increase of length in its extended state, and that to which it returned when the weight was removed, and finally ascertaining the weight required to produce rupture. The results of his experiments are contained in an extensive series of tables, for which we must refer to the original paper. The general conclusions deducible from them are the following.

The specific gravity of the tendons, muscles, and veins, diminishes with age. But this change is not generally observed in the bones, nerves, and arteries. In the latter, owing to thickening and ossification of the coats, it is sensibly increased.

The increment in length of a bone is proportional to the weight by which it is extended, exactly as is the case with inorganic substances, and wood; but this does not hold good with the soft parts in their natural state of humidity, the law of their increment in length being represented by a curve approximating to a hyperbola.

Bones, tendons, and nerves, increase in elasticity with the age of the subject, but the reverse occurs in the muscles.

The elasticity and cohesion of bones is greatest, then come tendons, nerves, muscles, veins, and arteries.

The nervous trunks have, in proportion to their section, an amount of cohesion inferior to their immediate branches, and then again to the cutaneous nerves; so that, as the diameter of the nerve diminishes, its *proportional* cohesion increases.

By dessication, the elasticity and cohesion of all the tissues increases, and approximates more nearly to that of inorganic substances.—*Annales de Chimie et de Physique*, December 1847.

2.—Professor ROGERS *on the Absorption of Carbonic Acid by Sulphuric Acid.*—At the meeting of Association of American Geologists and Naturalists, held at Boston in September last, Professor W. B. Rogers gave an abstract of a series of researches lately made by himself and Professor R. D. Rogers, on the absorption of carbonic acid by different liquids. In these investigations the important fact was ascertained, that sulphuric acid at 60° Fahrenheit, absorbs carbonic acid gas in the large proportion of 94 per cent., and that Nordhausen acid absorbs 125 per cent. Professor Rogers pointed out how this fact must affect the accuracy of certain methods of determining the amount of carbonic acid in the free atmosphere, as in the experiments of Boussingault and others, and of that contained in the air of mines, and in the air expired in respiration. The use of the sulphuric acid as a drying agent in these processes, as well as in the apparatus of Fresenius for analyzing the carbonates, was thus shown to be attended with serious errors, in consequence of the absorption of the carbonic acid by the dessicating agent.

3.—Dr JOHN DAVY *on the Urinary Secretion of certain Animals considered in connexion with their Temperature, Food, &c.*—In birds, possessing of all animals the highest internal temperature, whether they be graminivorous or carnivorous, the urine consists chiefly of lithate of ammonia.

In insects, whose internal temperature is variable, whether living on vegetable or animal substances, or both, he found the urinary secretion, like that of birds, composed chiefly of lithate of ammonia, and lithic acid.

Spiders, animals of a low internal temperature, but of considerable activity, and living on insects, secrete a urine of a different kind, being composed of xanthic oxide.

In serpents, in many respects resembling the spiders in their physiological conditions, the urinary secretion is chiefly composed of lithate of ammonia. The urinary secretion in lizards appears to resemble that of serpents.

In frogs and toads, whose internal temperature is also low, and which resemble the animals last mentioned in living on animal food, and being capable of long-continued fasting, the urinary secretion does not consist, as in those, of granules of lithate of ammonia, mixed with a little watery fluid, becoming solid before, or shortly after being voided; but consists chiefly of water holding in solution urea and a little saline matter, and in its composition may be considered as an approach to the human urinary secretion.

"What are the bearings of these facts in their physiological relations? Do they not prove that neither the temperature of the animal, nor its activity, nor even its food (that is, the physiological conditions connected with respiration, muscular action, digestion, &c.), affect materially the nature, as to composition, of the urinary secretion? And does it not follow that the quality of this secretion, therefore, must depend chiefly on the intimate structure of the secerning organs?" Dr Davy states, that though he believes that the quality of the secretion from the kidneys depends chiefly on structure, yet it is affected in a minor degree by circumstances of diet, and of atmospheric temperature, especially in man. In a cold or cool climate, using a diet chiefly of animal food, lithic acid and lithate of ammonia are found commonly, in considerable proportion, in the human urine; but not so in a hot climate, not even when the diet is the same; and in consequence, within the tropics, where least oxygen is consumed in respiration, the ailments depending on the formation of gravel and calculi are almost unknown. —*Edinburgh New Philosophical Journal*, January 1848.

4.—Mr TURNER *on the Eighth and Ninth Vertebræ of the Three-toed Sloth.*—Mr H. N. Turner jun., discusses the point, whether the eighth and ninth vertebræ of the aï or three-toed sloth (Bradypus tridactylus) are to be regarded as belonging to the cervical or dorsal vertebræ, and he arrives at the conclusion that they belong to the cervical.

That those of our readers who may not have previously had their attention turned to this question, may be able to understand its bearing, we shall make a few remarks upon it. Daubenton announced that all the mammalia, whatever may be the length of the neck (in the giraffe as in the cetacea,) the number of cervical vertebræ is invariably seven, and this was universally assented to at the time. Cuvier, however, in the course of his dissections, ascertained that the aï, one of the sloths (all sloths do not present this peculiarity), had nine cervical vertebræ, and thus undermined the generalization of Daubenton. Professor Bell of London, in a paper in the Zoological Transactions, discovered that rudimentary ribs were attached to the eighth and ninth vertebræ in the aï, and he ingeniously attempted to prove that these were dorsal and not cervical vertebræ, and that Daubenton's generalization was not impaired by the structure of the aï. De Blainville, a few years ago, and Mr Turner, in the communication referred to above, have entered into various anatomical details, which appear to us to prove that the eighth and ninth vertebræ in the aï are cervical and not dorsal, and that they in fact resemble the seventh cervical vertebra in man. It is well known that the seventh cervical vertebra in the human species is occasionally provided with rudimentary ribs, and Mr Turner found rudimentary ribs attached to the same vertebra in a pole-cat. De Blainville has ingeniously arranged the cervical vertebræ into three groups: The first includes the atlas and axis: The second—the third, fourth, fifth, and sixth; the third includes only the seventh in the human species, and almost all the other mammalia; but in the aï includes three vertebræ, viz. the seventh, eighth, and ninth.—*Annals of Natural History*, December 1847.

5.—*On the Jalap Plant which has lately flowered in the Edinburgh Botanical Garden.* By Professor BALFOUR.—Although jalap has been used in European medicine for nearly two centuries and a half, it is only within a few years that its botanical source has been correctly ascertained. The plant long cultivated as the true jalap plant in the stoves of Europe, and among the rest in the Botanic Garden of Edinburgh, is the *Convolvu-*

lus Jalapa of Linnæus and Wildenow, or *Ipomœa macrorhiza* of Michaux, a native of Vera Cruz. But between the years 1827 and 1830, it was proved by no fewer than three independent authorities, that the root of commerce is obtained, not from the hot plains around Vera Cruz, but from the cooler hill country near Jalapa, about 6000 feet above the level of the sea, where it was exposed to frost in the winter time; and that the plant which yields it, is an entirely new species of the Convolvulaceæ. In this country it was probably first cultivated in the Botanic Garden of Edinburgh, from a tuber sent by Dr Coxe of Philadelphia to Dr Christison, in 1838. Dr Graham could not describe it at that time, because, owing to unacquaintance with the habits of the plant, it was forced in the stove, and died the same year, after forming numerous flower-buds, of which one only became partially developed. In 1844, a plant from the Chelsea Botanic Garden, cultivated in a cold frame in the Edinburgh garden during the winter and spring, survived in the summer and autumn, and flowered luxuriantly in September. But the crown of the tuber was injured by frost in the subsequent winter, and the tuber was thus killed. Ultimately, Mr M'Nab resolved to try whether the plant could be reared from slips; and the experiment has proved successful. A tuber, of the size of a hazel nut, formed in the course of three months. The stem made little progress next summer; but when transferred to the cold frame in the spring of 1846, formed the plant which flowered in October.—*Edinburgh New Philosophical Journal*, January 1848.

II.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

6.—*On the Nucleus of the Animal and Vegetable Cell.* By Dr Martin Barry.—Schleiden ascribed to the nucleus of the vegetable elementary cell the power of forming around it a membrane which became the cell-membrane or cell-wall; hence he gave to the nucleus the name of cytoblast. But with the formation of the cell-wall he conceived the function of the nucleus to cease; and thought that, being no longer required, it became inert in the cell-wall, or in some instances was absorbed. The nucleus itself was, in the first instance, produced by a similar mode of development, being deposited around a smaller body, which sometimes remained as a permanent nucleolus. The same view of the formation of cells was advocated in relation to the animal tissues by Schwann, Müller, Henle, and Valentin, the last of whom thus describes the process:—"In a fluid there are precipitated granules, which are nucleoli; around the nucleolus there is deposited a finely granular substance, by which there is formed the nucleus (cytoblast); and around the nucleus there is formed the membrane of the cell. The principle of formation of the nucleus around the nucleolus, is essentially the same as that of the cell around the nucleus."

To borrow the language of the botanist, the preceding physiologists consider the vegetable animal cell to have an "exogenous" development; the primitive nucleolus remaining *central*, and the subsequent formations being deposited layer by layer *around* the nucleolus, which, so long as it remains at all, retains the same relative position. This view Dr Barry conceives to be incorrect, and propounds a theory of cell-development which corresponds much more closely with the type of structure called in botany "endogenous." Dr Barry describes the development of the cell as being analogous to that of the mammiferous ovum. According to him the original granule or nucleolus gradually enlarges, and in time develops *within it* a second body, which, appearing at first as a pellucid point, comes to occupy the position and assume the form of the original nucleolus, which has now expanded into a nucleus (the cytoblast of Schleiden). Thus the primitive formation becomes peripheral, while the secondary nucleolus occupies the central position. The same law is pursued in the further development. The nucleus or cytoblast becomes a cell, and the secondary nucleolus becomes in its turn a nucleus by the development *within it* of a tertiary formation, which assumes the position and functions of the nucleolus. In the complete cell thus formed there are three parts—1st, the cell-membrane, or cell-wall of Schleiden, which is the original or *primary* nucleolus; 2d, the nucleus (cytoblast of Schleiden), which is the *secondary* nucleolus; 3d, the true nucleolus of Schleiden, which is the *tertiary* or last developed nucleolus of Dr Barry.

According to this theory, therefore, cells are developed *endogenously*; the first formed parts being always found at

the periphery, and the last or most recent at the centre. The central parts by renewed developments are expanded and pushed outwards; and thus the nucleolus becomes a cytoblast, and the cytoblast becomes a cell.

The development may, however, proceed according to the same law, beyond the stage which corresponds to the complete cell of Schleiden; its further stages becoming complicated by the subdivision of the nucleus. According to Dr Barry, this body sends out processes into the surrounding substance, assuming in this way a stellated form. As development proceeds, each of these projecting portions of the nucleus becomes a separate centre, from which new cytoblasts are generated as already described; the central original nucleolus undergoing also a similar development. In this way the original cell may become a body of the utmost complexity of structure; the nuclei being subdivided into new centres or nucleoli, and these undergoing endogenous development into nuclei and cells.

The mode of fissiparous multiplication thus ascribed to the nucleus, was first seen by Dr Barry in the germinal spot of the ovum, which he considers to be the type of all cell-development. He has, however, traced the same process in many elementary cell-formations, including blood-corpuscles, pus and mucus globules, and epithelium cells.

Dr Barry gives to the pellucid point, which is the first stage of Schleiden's nucleolus, the name of hyaline. This hyaline is at first quite structureless, and even after it has enlarged considerably, presents no distinct membranous envelope. Before the formation of the secondary nucleolus, however, it becomes surrounded by a number of extremely minute granules, which appear to enter into the formation of its envelope. In like manner the secondary nucleolus is at first formed without a membrane, but afterwards acquires one by the coalescence of a layer of superimposed granules. The minute granules which thus enter into the formation of the cell-wall, are considered by Dr Barry to arise from the hyaline, and to be themselves the result of an exceedingly minute process of cell-development. This structure he has described and figured in the ovisac.

It only remains to say that Dr Barry conceives this mode of cell-formation to be universal; and that, in particular, he believes the blood-corpuscles to arise in the ovum, and at all subsequent periods in this manner. Futhermore, he refers to his former memoir (Philosophical Transactions, 1841), in which he stated, that all the tissues were formed from corpuscles, having the same appearance as the corpuscles of the blood, and which he believes to be actually blood-corpuscles which had been in the circulation. Into the proof of this theory, and the other illustrations which he gives of his views of cell-formation, we have not space to enter at present.—*Edinburgh New Philosophical Journal*, October 1847.

7.—*Experiments on the Effects of Reagents on the Sentient Extremities of the Nerves.* By ERNST HEINRICH WEBER.—On dipping the tongue into water cooled to the freezing point, or heated to 90 degrees Fahrenheit, the author found, that after a short time both the common and special sensation of the organ became very much impaired. Sweet tastes were not appreciated, and the application of varying amounts of pressure, or different degrees of temperature, produced no corresponding sensations. In an extremity, the action of cold or heat upon the ultimate ramifications of the nerves, is to produce a benumbed condition, similar to that caused by pressure on the trunk of a nerve. Weber also discovered, that when the nares are filled with fluid, of whatever temperature, the sense of smell is destroyed. He found that the mechanism of the soft palate enables it to close the posterior nares, and thus admits of the above experiment being tried.—*Müller's Archiv.*, No. 4, 1847.

8.—*Effects of Galvanism on the Contractility of Arteries.* By EDWARD and E. H. WEBER.—The authors, in pursuance of the experiments on muscular contractility, formerly noticed in *The Monthly Journal*, May 1847, in which the rotating electro-galvanic apparatus was employed, have applied the same agency to the arteries, with the following results. Arteries of $\frac{1}{4}$ to $\frac{1}{7}$ of a line in diameter, were reduced, a short time after the application of the galvanic stimulus, to about a third of their original diameter; and further contraction, sometimes nearly to complete occlusion, was produced by a longer application of the stimulus. The contraction did not extend beyond the part affected by the galvanic current, and on the cessation of stimulation the artery again relaxed. In the larger arterial trunks, the MM. Weber did not succeed in producing contraction. In the capillaries no change of size was observed; a strong current produced coagulation of the blood in the vessels; a weaker one produced retardation of the blood; and

finally, stoppage, with accumulation of the corpuscles, behind the obstruction. On the galvanic stimulus being removed, the circulation gradually returned to its natural condition.—*Müller's Archiv.*, 1847, No. 2.

9.—*The Functions of the Spleen, and Constitution of Venous Blood in different Parts of the System.* By M. Beclard.—It is, from many circumstances, probable that the spleen is an organ intended, in some way or other, to operate upon the blood which passes through it; and in order to ascertain whether any, or what changes, are produced by it, M. Beclard has performed a series of analyses of venous blood, the results of which he has here detailed, and which lead to conclusions of a very remarkable character. His experiments entirely disprove the opinion of Donné, that the spleen is the organ by which the blood-globules are formed; as he has found that the blood of the splenic vein (previous to its junction with the vena portæ and veins of the stomach) contains a quantity of globules, inferior not merely to arterial, but even to the average of that contained in venous blood generally. On the other hand, the proportion of albumen is increased.

The examination of the blood of the vena portæ shows a very large proportion of globules, and a corresponding diminution of the albumen, as is clearly shown by the following table:—

	Venous Blood from Jugular Vein.	Arterial Blood.	Blood of the Splenic Vein.	Blood of the Vena Portæ.
Water, ...	778·9	750·6	746·3	702·3
Albumen, ...	79·4	89·5	124·8	70·6
Globules and Fibrine, .	141·72	159·9	128·9	227·1

The author has established the fact, that though the constitution of venous blood varies, that of the arterial blood is constant in every part of the arterial system.

M. Beclard is still engaged in the prosecution of these experiments; and his present communication appears to be merely the announcement of an extended investigation, which, should the first results be borne out, is likely to throw an important light on the functions of the abdominal organs.—*Annales de Chemie et de Physique*, December 1847.

10.—*Influence of Common Salt on the composition of the Blood.* By M. Plouviez.—M. Plouviez considers common salt to be a tonic, and to possess the power of modifying the constitution of the blood; and states, that he has employed it with great advantage in scrofula, anemia, and chlorosis. In order to establish the effect which it produces, he analysed his own blood at two different periods, during the first of which he took daily ten grammes of salt more than usual, and the second, after he had ceased for two months to take this unusual quantity, and with the following results:—

	First Period.	Second Period.
Water,	767·60	779 92
Globules,	143·00	130·08
Fibrine,	2·25	2·10
Albumen,	74·00	77·44
Fatty Matters,	1·31	1·13
Salts and Extractive Matters,	11·84	9·33
	1000·00	1000·00

Substances soluble in water.

Chloride of Sodium,	6·10	4·40
——— Potassium,	0·30	0·27
Phosphate of Soda,	1·68	1·37
Sulphate of Soda,	0·42	0·44
Alkaline Carbonates,	0·56	0·48
Loss,	0·18	0·10

Substances insoluble in water.

Phosphate of Lime,	0·72	0·67
Carbonate and Sulphate of Lime,	0·38	0·34
Oxide of Iron,	1·50	1·26

It is obvious from these analyses, that when common salt was taken in large quantities, it was present in increased amount in the blood, and that the globules and oxide of iron were increased, while the water and albumen were slightly diminished; but repeated analyses would be necessary, in order fully to establish its influence on the blood.—*Journal de Pharmacie*, Vol. XII. p. 206.

11.—*On the Digestion of Alcoholic Drinks, and their Function in Nutrition.* By MM. Bouchardat and Sandras.—The authors have performed a series of experiments, with the view of ascertaining the mode in which alcohol is absorbed, and the changes which it undergoes in the system. Their first experiments were made upon dogs, which were killed two hours after the administration of a quantity of alcohol. The chyle and blood were separately examined for that fluid, which was found totally absent in the former, but present in minute quantity in the latter. Acetic acid was also detected

in the blood by distillation with sulphuric acid, after the separation of the alcohol which it contained.

Owing to the difficulty in getting dogs to take spirituous fluids, they afterwards made use of fowls and ducks; and it was was found that, in most cases, where the blood was taken sufficiently soon after the administration of the alcohol, both that substance and acetic acid could be detected in it in minute quantity. Very rapid absorption also takes place, and in one experiment, the authors found that three-fourths of the spirit administered was absorbed in less than twenty minutes.

It was then ascertained that the quantity of alcohol which escapes by the lungs is quite inconsiderable. This was determined by directing the gases and vapours evolved during respiration, by a man who had taken a considerable dose of alcohol, through a Woulff's bottle, surrounded by a freezing mixture. After the operation had been conducted for two hours, only a minute quantity of alcohol was found in the condensed fluid. None escaped by the urine or other secretions.

In the case of a man who, after a three days' debauch upon strong punch, was seized with a succession of epileptic fits, they found that blood drawn immediately from the jugular vein contained both alcohol and acetic acid in small quantity, while that taken an hour later contained none. They found, however, by Frommherz's test, distinct indications of the sugar which had been present in the punch, from which the authors draw the conclusion that alcohol is more rapidly digested than sugar.

From these experiments the authors conclude that alcohol is absorbed by the veins, and not by the lacteals, and that, with the exception of the small quantity which escapes by the lungs, it is entirely oxidized into carbonic acid and water, either directly, or by passing through the intermediate stage of acetic acid.—*Annales de Chimie et de Physique*, December 1847.

III.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

12.—*Upon the Origin of the Granular Cell (Exudation Corpuscle,* Henle; *Inflammation Globule,* Gluge). By M. REINHARDT.—The author, in some former researches on the granular cell, came to the conclusion that all nucleated cells having albuminous contents, were capable, under certain circumstances, of becoming granular cells, whether they were originally normal constituents of the organism, or productions peculiar to the pathological condition. Having shown that this is the case in the products of inflammation, he now proceeds to demonstrate the same fact with regard to other cell formations, particularly in the *membrana granulosa* of the Graafian vesicles of the mammalia. The Graafian follicles, as is well known, are found in the ovary in great numbers, the great proportion of them being abortive, and, after a certain period of growth, diminishing and being absorbed. While the growth of the vesicles is proceeding, they are quite transparent and globular; the fluid which distends them is transparent, of a yellow colour, free of granules, and frequently coagulable. The membrana granulosa, at this stage, presents the appearance of a soft pellicle; microscopically examined, it consists of nucleated cells placed close together, and having a diameter, in most animals, of from 0·004 to 0·007‴; their nucleus, which is from 0·003 to 0·005‴, appears decidedly granular. The cell membrane is transparent and structureless. The contents of the cells are sometimes a little turbid, from the presence of molecules, but are rendered clear by acetic acid, and also by caustic alkalies. Along with these cells are found other bodies, which are evidently a prior stage of their development. First, there appear small molecules soluble in caustic alkalies, sometimes very pale, sometimes more distinct and shining; then small granules varying from 0·0005 to 002‴, which have the same reactions as free cell-nuclei; they are sound, smooth, and shining, without nucleoli. When treated with acetic acid, they become flattened, and acquire a central depression like the nuclei of pus corpuscles. Next to these appear small cells, from 0·001 to 0·003‴, which have one or sometimes two nuclei of the same appearance as the free nuclei above described. The contents of these cells are mostly transparent, but sometimes they appear to contain small molecules of proteine. The cell membrane is delicate and transparent. Between these cells and the above described granulated cells, every grade can be traced. Thus, there appear somewhat larger cells, whose nuclei are no longer round and homogeneous, but somewhat flattened and granular, and also further

developed cells with oval and very granular nuclei. As the cell also increases in size it loses in transparency, till it comes to present the finely granulated appearance of the ordinary cells of the membrana granulosa.

When the Graafian follicle has begun to take a retrograde course, changes in colour and consistence take place in the contained fluid, which becomes more or less turbid; and as the diminution of the vesicle goes on, more viscid, till it resembles pus both in colour and consistence Afterwards it becomes cheesy and viscid, and finally changes into a dry crumbling mass. Along with these changes, the microscope shows the alteration of the cells above described, to go on by the accumulation of more and more granular matter in the nucleus, and also within the cell wall, obscuring the nucleus, until they become true granular corpuscles. When the matters in the Graafian follicles has dried in considerably, there are associated with these granular cells, granular masses (exudation masses, *Bennett*) in considerable numbers, which, on pressure, break down into smaller masses, and free granules, which are also present in great numbers. The cells are here manifestly in a state of disintegration, and many of them are found pressed together into coherent masses.

Thus, it plainly appears that the granular cells, or so-called inflammation globules of Gluge, are by no means characteristic of inflammation, or peculiar to it. Further, it would appear that the true explanation of these bodies is, that they are retrograde nucleated cells. The alteration of an ordinary cell, with albuminous contents, into a granular cell, is indicative of the commencement of a retrogressive metamorphosis, whose final result is the destruction of the cell, by its resolution into a mass of agglomerated fatty and proteine granules. As regards the conditions of this change, we know little; it seems, however, to be necessary that changes should take place in the fluid, which forms the nourishment of the cells, rendering it impossible for these latter to retain their contents in the former state of combination. They continue to live for a while, absorbing more and more of the surrounding fluid medium; at last their vitality is extinguished, and they become granular masses, which finally fall asunder. Where the fluid surrounding the granular cells is entirely or nearly reabsorbed during their metamorphosis, the cell wall appears to become undistinguishable from the contents of the cell, and the whole is disintegrated *en masse*. Where the medium remains fluid, on the contrary, the cell wall disappears first, and then the nuclei are often seen filled with granules, which in time become also broken up and scattered.

A similar transformation of cells with albuminous contents into granular cells has been observed by the author in the corpus luteum, and also the epithelia of various serous and mucous membranes: thus, he has observed it as a pathological process in the epithelial cells of the pleura and peritoneum, in the ciliated epithelium of the bronchi, and the permanent epithelium of the air-cells of the lungs; in the cylinder epithelium of the intestinal mucous membrane in slight diarrhœa; in the uterus in the formation of the decidual membrane. He has observed the same change in the epithelium of the external skin, in cells taken from the deeper lying parts of the epidermis, in a case of Panaritium subcutaneum.

An accumulation of fat-molecules sometimes takes place also in the cells which cover the mucous membrane of the glands. The granular bodies of the colostrum afford an example of this transformation in the epithelium of the mammary ducts. These bodies have been long known to physiologists, and present a structure precisely similar to the granular cells described by pathologists. The author describes carefully their origin and progress, which is substantially the same as in the cells of the membrana granulosa, as above described. In consequence of the increased attraction of blood to the gland during pregnancy, and its increased activity, the epithelium cells are thrown off in greater numbers than usual, and the milk ducts become distended. This superfluous epithelium, therefore, is converted into granular cells, or colostrum corpuscles, and thence into masses of agglomerated fatty granules, which are then broken up and absorbed. During the first few days after delivery, these bodies continue to be developed, and are washed out with the first formations of milk, which constitute the colostrum. The author has found in the mammary gland of a female who died in the fourth month of pregnancy, the milk-ducts considerably enlarged and filled with epithelium cells, many of which had already begun to undergo the metamorphosis in question. He has likewise found a similar development of granular cells in some pathological conditions of the breast, as in cancer and in simple hypertrophy.

The transformation of glandular epithelium cells into granular cells, is also observed in the kidney in many cases of

Bright's disease. In the cylinder epithelium of the seminiferous ducts of old men, there may frequently be observed an accumulation of fatty granules. The same transformation of the hepatic glandular cells is an appearance characteristic of the commencement of fatty liver. In the lymphatic glands, there are frequently found, both in the normal and pathological conditions, a few larger cells than ordinary filled with fatty molecules. In the colourless corpuscles of the blood of various animals, Virchow has demonstrated an accumulation of fatty molecules. The author has made the same observation in pregnant dogs, in horses affected with glanders, and on one occasion in the blood of a pneumonic patient. In cataract he has found the cells of the liquor Morgagni full of fatty granules, which he also found among the fibres of the lens. Finally, in pathological tissues, it is very common to find granular cells, or so called inflammation-globules, developed from cells having albuminous contents. — *Schmidt's Jahrbücher, Oct.* 1847, *from Virchow and Reinhart's Archiv.* I. 1, 1847.

[This is a very valuable paper, and shows conclusively that epithelial are transformed into granular cells. That such, however, is not the only origin of these bodies, is proved by their great frequency in cerebral softenings, where no such explanation can apply to their formation. In such cases, numerous observations have convinced us that transparent exudation cells are first formed, which afterwards become granular.]

13.—*Chemical Researches on the Blood in the General Paralysis of the Insane.* By M. MICHÉA.—In these cases the analysis of the blood has given results of a very variable character. In general, the globules are increased; and it is only in a small minority that they exist in their normal quantity, and, in a still smaller, that they are diminished. In the majority of cases, the fibrine is natural; it diminishes in a certain number; and is seldom increased. The solid constituents of the serum are, in the majority of cases, in their normal quantity; are increased in very few cases, and notably diminished—especially as regards the albumen—in about a third of the cases examined. The water is generally increased, but often diminished in amount.

From these investigations, M. Michéa draws the conclusion, that the augmentation of the globules, and decrease of the fibrine, occurring together or separately, are the cause of the cerebral congestion so frequent in the paralysis of the insane. The diminution of the globules is occasionally connected with convulsive and cataleptic attacks; while the increase of the fibrine occurs along with epilepsy, and other symptoms of acute inflammation of the brain and its membranes.

The investigations of M. Michéa, according to their author, indicate bleeding and low diet as the rational treatment of the diseased, except in those cases where we have reason to suspect pressure on the brain from the accumulation of serum, or where the analysis of the blood displays a tendency to diminution of the globules, in which cases purgatives should be employed in place of bleeding.—*Comptes Rendus,* 29th November 1847.

14.—*Cataract composed of Phosphate of Lime.* By M. MAGNE.—The patient, aged forty-seven, had, twenty-five years previously, got some sparks of melted silver in his eye, which occasioned the cataract in question. One morning on getting up, the cataract had fallen forward into the anterior chamber of the eye, apparently in consequence of a violent fit of rage into which he had fallen the night before. Violent pain and inflammation supervened, and M. Magne performed the operation of extraction, which was performed with difficulty, owing to the restlessness of the patient. It was a perfectly hard capsular cataract, and an analysis by M. Lesueur showed that it consisted entirely of phosphate of lime, with a very small quantity of animal matter.—*Comptes Rendus,* 29th November 1847.

IV.—PRACTICE OF MEDICINE.

15.—*Hebra's System of Skin Diseases.* By Dr FÜRSTENBERG of Berlin.—[During a short visit that we paid Vienna in the autumn of 1846, we were much gratified in examining the division for skin diseases conducted by Dr Hebra, at the great hospital in that city. His arrangement and method of treatment are, not only in many respects novel, but highly valuable; and in introducing a sketch of them, lately drawn up by Dr Fürstenberg of Berlin, to the English reader, we hope to advance in some degree this much neglected branch of prac-

tical medicine. Dr Hebra has earned for himself a well-deserved reputation, by cultivating diseases of the skin on a scientific basis, and his treatment is decidedly the most successful of any practitioner we have come in contact with].

Hebra divides skin diseases into twelve classes.

I. Class.—Hyperæmic Diseases, characterised by slight swelling of the skin, with a bright or bluish-red coloration of it; the redness disappears on pressure. They may be active and idiopathic, as the *Erythema traumaticum*, as it occurs after baths, inunction, &c.; or active and symptomatic, as *Roseola variolosa, Vaccinia infantilis, Urticaria ephemera, rubra*; or they may be passive, *i. e.* caused by obstruction to the flow of venous blood. The colour is in such cases more of a bluish-red, as in the *Livor cutis*, as a consequence of exposure to cold, or of poisoning and *post-mortem* sugillation. Cyanosis is an example of passive and symptomatic hyperæmia.

II. Class—Anæmic Diseases occur after loss of blood, or relative deficiency of blood, as in cases of obstructed circulation, or in cachexia, and are characterised by paleness of the skin.

III. Class includes Anomalous Secretions, and Anomalies of the Secreting Organs. The two secretions of the skin are perspirations and unctuous matter (*sebum*). Hebra, therefore, subdivides this class into anomalies of the perspiratory and unctuous secretions, both as respects quantity and quality. *Hyperidrosis, Anidrosis*, and *Oligidrosis*, exemplify the perspiratory secretion diseased as to quantity; while *Bromidrosis, Chromidrosis*, &c., to which he adds the *odor specificus exanthematum*, are examples of its being diseased in quality.

Seborrhœa arises from increased secretion of the sebum. When not congestive, it is easily removed by ablutions with soap; if it, however, be congestive, it forms Bateman's *Ichthyosis faciei*. It is most frequent on the face, particularly about the region of the nose. Where the follicles are most numerous, it appears as a red basis, on which are seen the scales, with their peculiar fatty lustre, and the follicles like white granules; this latter symptom serving to diagnose it from the commencement of *Lupus* and *Pityriasis rubra*. Three to five washings (one twice a-week) with a solution of one part of caustic potass in two of warm water, are generally sufficient for the cure, cold fomentations being applied on the intermediate days in the most acute cases.

From increase of the sebum, along with closure of the follicular duct, arise *Comedones*, or *Lichen albus*, or tumours of considerable size may be found. *Molluscum contagiosum* is only a *Tumor folliculorum*. In time, the secretion may be so altered as to become of a stony hardness, forming *Cryptolithes*. The treatment is mechanical, the application of dry cupping-glasses, particularly where comedones of large size occur, as upon the back—or chemical, the use of potass solutions, much weaker, however, than in seborrhœa.

Alterations in the secretion of *smegma* are also the cause of the *Asperitude epidermidis* and *Pityriasis localis*, as it often occurs in washerwomen, and in which the want of unctuous matter is best remedied by frictions with oil or grease.

IV. Class is the most important division, comprising the *exudations*. These are either effused between the different layers of the skin, forming vesicles, bullæ, pustules, or we have a reddened portion of skin; the redness disappears on pressure, leaving, however, a yellow coloration. They form two great divisions, acute and chronic exudations, and the first becomes again subdivided into the contagious and non-contagious. The contagious are, *Morbilli, Scarlatina, Variola, Vaccinia*. Hebra recommends, in all these diseases, an entirely expectant treatment, and in all the daily washing of the body with cold water, which in nowise interrupts the progress of the exanthema.

The non-contagious acute exudative processes form two sub-groups, the fibro-albuminous and the serous. To the first belong various kinds of erythema—*Erythema papulatum, tuberculatum, nodosum, mammelatum, annulare, iris, gyratum, circumscriptum, marginatum, intertrigo, urticans*; also *Roseola* and *Dermatitis seu Erysipelas*, which latter he again subdivides into erythematous—where the papillæ and chorion alone are affected—and phlegmonous, where the entire cutis and subcutaneous tissue are affected; to the latter belong, besides, the idiopathic inflammations of the skin,—*Pseudo-erysipelas, Furunculus*, and *Anthrax*.

Acute serous exudations are, *Urticaria, Herpes, Miliaria, Sudamina*, and *Pemphigus*.—(*To be continued.*)

16.—*On Inflammation limited to the Ventricular Serous Membrane, and on its termination in Chronic Hydrocephalus.* By Dr Rilliet of Geneva.—According to Dr Rilliet, inflammation limited to the membrane which lines the ventricles of the brain, is so rare that he has been unable to find a recorded case of it.

He, therefore, describes one which terminated in chronic hydrocephalus. A young girl, ten years and a half old, intelligent and well developed, was seized suddenly with violent cephalalgia, accompanied by vomiting, fever, and intolerance of sound and light. On the fifth day there was a violent attack of general convulsions. On the seventh day dulness of hearing, and afterwards cephalalgia, vomitings, and especially convulsions. On the eighteenth day, retarded and irregular pulse; complete deafness on the twenty-first day. On the fifty-second day the intelligence commenced to diminish, and the convulsions became more rare. On the sixty-third day, there were involuntary stools; almost complete idiotism on the sixty-eighth day; disappearance of convulsions in three months. Eight days later there were vomitings, with intermitting convulsive cries, and in one of these attacks she died, four months after the commencement of the disease.

On examination, the cerebral convolutions were completely obliterated, and there was a little opacity of the membranes enveloping the nervous centres. Arachnoid slightly thickened and opaque, without any character of inflammation, acute or chronic. There were ten ounces of limpid and strongly albuminous serum in the ventricles, and their lining membrane had a gelatinous aspect, was half a millimetre in thickness, and of remarkable consistence.

M. Rilliet discusses successively the three opinions which may present themselves in connection with this case—whether it be one of essential hydrocephalus, of ventricular hemorrhage, or of inflammation. He pronounces for the last opinion, especially on account of the fever present at the commencement, and of the convulsions, which appeared only on the fourth day. He concludes, first, that the membrane which lines the ventricles may be inflamed without the arachnoid and pia-mater of the periphery participating in the inflammation; secondly, that this meningitis is characterised by cephalalgia, vomitings, constipation, a tolerably intense fever, and repeated convulsions without alteration of intelligence; third, that the inflammation may terminate by a chronic hydrocephalus, as distinguished by failure of the intelligence, and latterly idiotism; fourth, that in this form of hydrocephalus the liquid effused is strongly albuminous. —*Archiv. Génér. de Méd. Dec.* 1847; *and L'Union Méd. 1st Janvier* 1848.

[This is a very interesting case, but we are at a loss to understand how it can be maintained that no inflammation, acute or chronic, affected the meninges of the periphery, when it is recorded that they were somewhat thickened and opaque. We are of opinion that such cases are not uncommon, although they are rarely observed during life with the accuracy M. Rilliet has displayed. We have seen the same lesion in the dead subject several times. The writer of the memoir lays down with considerable confidence the diagnostic symptoms between meningitis of the ventricles, and meningitis of the hemispheres; but, considering that he has only observed one case of the former, his statements on this subject must be received with great caution.]

17.—*New Treatment of Œdema of the Glottis.* By Dr BUCK.—Dr Gordon Buck stated to the New York Medical and Surgical Society, June 5th last, that at had long ago occurred to him, that in cases of the œdema of glottis, when suffocation seemed imminent, the patient might be relieved by incising the edges of the glottis and epiglottis. An opportunity having recently occurred, he had had recourse to the practice with decided benefit. The patient suffering under inflammation of the fauces, became affected with dyspnœa, attended with paroxysms of impending suffocation. On passing the finger into the fauces, the epiglottis could be felt enormously swollen and tense. The swelling of the glottis could likewise be distinguished. In the operation, a pair of curved, sharp-pointed scissors was employed, and afterwards, a curved, sharp-pointed bistoury, guarded to within a quarter of an inch of the point. The patient expectorated two or three spoonfuls of blood, mixed with the secretions of the fauces, and expressed himself decidedly relieved. Besides the operation, the patient was bled, leeched, inhaled aqueous vapour, &c. He recovered.

Dr Clark said, that he thought the suggestion of Dr Buck a highly important one; the œdematous swelling, in such cases, being principally situated on the posterior surface of the epiglottis, and on the upper and posterior part of the glottis. In this last situation it had a valvular action, rising up during expiration, but closing, and thus impeding inspiration. Indeed, the fact that the difficulty occurred only during inspiration, was characteristic of the disease. Dr C. thought the parts could be safely and easily reached, and that the operation afforded every promise of relief.—*Amer. Jour. of Med. Sci., and Dub. Med. Press*, December 22d, 1847.

18.—*Case of Laryngitis, accompanied by*

the formation of False Membrane in the Trachea and Bronchi, in which Tracheotomy was successfully performed. By T. A. Barker, M.D., &c.—At a meeting of the Royal Medical and Chirurgical Society of London, Dr Barker read the following case :—

A woman, aged twenty-two, four months pregnant, after delicate health, and symptoms of commencing phthisis for nine months, and pain on deglutition for three months, was admitted into St Thomas's Hospital with chronic laryngitis, and signs of tubercles, in an early stage, at the commencement of January 1847. In a few days the symptoms became urgent, indicating the necessity of immediately opening the trachea. The operation was performed by Mr B. Travers, junior, and the woman was nearly asphyxiated before it was completed, in consequence of a false membrane formed in the trachea, where the opening was made, blocking up the tube below the opening, having, probably, been forced downwards by the scalpel. Five days after the operation there was extensive hemorrhage from the wound, and, together with the blood, a large quantity of fibrinous matter, evidently casts of bronchial tubes, was expectorated. The wound gradually closed, and there was no return of dyspnœa; but as the tubercular disease in the lung advanced, there was incessant cough, and the stomach became very irritable. Six weeks after the operation the patient died exhausted. The mucous membrane of the larynx and upper part of the trachea was completely destroyed, and both lungs, especially the right, were thickly studded with tubercles in an early stage. As life was prolonged for six weeks, the death was not ultimately caused by obstruction in the larynx, the author considered this a successful operation, though performed under unfavourable circumstances. There was ulceration of the trachea at the part where the opening was made, which prevented the use of a trachea tube, on account of the irritation it excited; there was false membrane both in the trachea and bronchi; there were tubercles in the lungs; the patient was exhausted by copious hemorrhage on two occasions, and was much depressed in mind; nevertheless, she survived for six weeks.—*Medical Gazette*, January 6th, 1848.

[This case is valuable, as showing that the formation of lymph on the mucous surfaces of the trachea and bronchi is no contra-indication to the operation. In the discussion which followed, Mr Hilton stated, that the employment of the trocar and canula was preferable to the knife, as tending more effectually to prevent the escape of blood. He asked whether the moulds expectorated, might not be the blood which had escaped from the wound, coagulated. Dr Barker, in reply, stated, that a microscopic examination by Mr Grainger had enabled that gentleman to determine them to be fibrine stained with effused blood. We should like to have learned, a little more particularly, how Mr Grainger was enabled to separate coagulated exudation on a mucous surface from the coagulum of blood.]

19.—*Varieties of Colic.* By M. Andral.—Most intestinal pains bear the name of colic, to which is superadded an epithet—bilious, inflammatory, nervous, &c.—to designate its nature. Nervous colic, or enteralgia, may arise spontaneously, and is remarkable sometimes by its extreme intensity, and the faintness which it produces; it is occasionally the result of rheumatism; and in the disease called "colic of Madrid," it is due to the sudden changes of temperature frequently noticed in the climate of that city. In the neighbourhood of the Ganges, a similar form of colic is also observed, under the influence of the same causes. In colica pictonum, enteralgia is also present; it is not always relieved by pressure, but pressure certainly diminishes the sufferings of the patient during their exacerbations. The form of the abdomen in this disease is not changed, nor its walls retracted, as it has been so often erroneously stated. Nervous colic has been known to assume an epidemic form, at sea for instance, after the prevalence of cold winds. In the colic caused by copper, the pain is also very great, but is accompanied by diarrhœa, and the disease certainly participates more of the nature of inflammation than of that of neurosis.—*Medical Times*, December 25, 1847.

20.—*Case of Convulsions depending on Tape-worm.* By Mr Hutching.—Mr Hutching relates the case of a girl, aged fourteen, who had suffered for three months from attacks of convulsions three times a-week. Tonic remedies were employed for a month, with some benefit to the general strength, and the convulsions disappeared; in another month, however, they returned with abdominal pain and diarrhœa. Worm powders, and Ol. Terebinth. in doses of twenty drops, were prescribed without effect. She was now ordered, Ol. Tereb. ʒiij; Ol. Ricini, ʒiv; Gr. Opii et Tr. Card. comp. aa. gtt xij: Aqua-Menth. virid. ʒ ss. M. St. Haustus,

primo mane exhib. In the night she passed five or more yards of tape-worm, since which she has permanently recovered.

Mr Hutching remarks that this case shows the inutility of small doses of turpentine in tape-worm, and illustrates how much suffering and nervous irritation may depend upon the presence of the parasite in the bowel, which ceased on its removal. —*Dublin Medical Press*, January 5, 1848.

V.—PRACTICE OF SURGERY.

20.—*Operations for Femoral Aneurism.* By C. B. GIBSON, M.D. — Patrick M'Vastry, æt. forty-five, a prisoner in the Maryland Penitentiary, presented himself to me on the 25th of June, with a large tumour occupying the greater part of the inguinal triangle (Scarpa) on the inner and anterior part of the left thigh. Its true nature was immediately discovered, and the patient put in preparation for an operation. From the close approximation of the aneurism to the crural arch, it was deemed expedient to tie the external iliac artery, and after a week's preparatory treatment, consisting in the regulation of diet, and attention to general health, Dr G. performed the operation on the 2d of July, assisted by Dr Alfred Baker.

The patient being placed on a narrow table, with the shoulders elevated, an incision, three inches and a half long, was made about an inch above and parallel with Poupart's ligament, commencing opposite the anterior superior spinous process of the ilium, and ending a little above the external ring.

The first cut divided the skin and superficial fascia, and exposed the tendon of the external oblique muscle, which was next divided to the same extent on the director. The lower margins of the internal oblique and transversalis, were now found and divided to the extent of three quarters of an inch upwards, when the fascia transversalis was exposed and torn with the finger nail, and the artery then discovered on the inner border of the psoas muscle, covered by the sheath it receives from the fascia iliaca.

The director was here used to rupture the sheath, on the inner side of the artery, and detach it from the vein, and when the whole circumference of the artery was thus cleared, the aneurismal needle armed with the ligature was easily passed around it, from the inner side above the epigastric.

The ligature was now drawn firmly and tied, and the pulsation in the tumour instantly ceased. The divided internal oblique and transversalis muscles were carefully adjusted, the wound sponged clean, and the edges brought together by the interrupted suture and adhesive straps, leaving merely space for the passage of the ligature.

On the third day after the operation, the wound was examined, and union found to have taken place by the first intention, with the exception of about a quarter of an inch round the ligature. The sutures were cut out and the straps retained. A slight discharge had stained the compress. The wound was dressed daily. On the twenty-first day the ligature was drawn away with a very slight effort, and the opening left gradually contracted and healed.

About ten days after the operation, the patient drew Dr G.'s attention to another tumour about the middle of the femoral artery on the opposite thigh, also aneurismal, and the size of a large walnut. He tied the femoral artery on this side, in its upper third, in the presence of Dr Baker, Dr Brokenborough of Richmond county, Virginia, and Mr Crittenden, a student from Virginia. The pulsation ceased immediately on the application of the ligature. The wound also healed by the first intention, and the ligature was detached on the eighteenth day.

The patient is now entirely well, and almost strong enough to resume the usual labour of the convicts.—*American Journal of Medical Science.*

22.—*Case of Un-united Fracture, treated by Galvanism.* By Mr BURMAN.—A gentleman, aged thirty-five, of robust constitution and sober habits, was thrown from his gig in the summer of 1845, and sustained a transverse fracture of the tibia and fibula in the lower third of the leg. The limb seems to have been placed and steadily retained in good position; but on removing the splints, when union was expected to have taken place, the fractured ends of the bones were found still loose and moveable. Fourteen weeks after the accident he placed himself under the care of Mr James Burman, under whose treatment he subsequently remained. At that time there was no formation of callus, and the fractured ends of the bone were quite moveable, but could be readily

adapted to each other; neither was there any inflammatory action about the parts, although, having been advised to rub the two ends of the bones together, he had very assiduously followed that advice.

The limb was now placed in a fixed apparatus consisting of *a sheet-iron boot*, which, when applied, embraced the whole leg, ankle, and foot, and, being well padded, the limb was immoveably fixed, part of the apparatus being made to fold back by a hinge, so that the seat of injury might be got at without disturbing the fracture. He was now directed to take daily exercise in the open air; to partake freely of wine, porter, and animal food, and when sitting in the house or lying in bed, to have the fractured ends firmly pressed against each other by means of a broad band passed over the knee, and under the foot-board, capable of being tightened by a strap and buckle, the leg being at the same time bent at a right angle with the thigh.

At the same time an electro-magnetic current was made to pass through the seat of fracture, by means of two needles inserted under the skin, one on each side of the fracture, and the current was maintained for nearly half-an-hour daily.

This plan of treatment was commenced on the 9th of October, and by the 22d, sufficient inflammatory action had been set up to render the further application of galvanism unnecessary; by the 30th, the deposit of callus was so copious, and the union of the fracture so firm, that, at the patient's earnest solicitation, he was allowed to return to his duties, with directions still to use his boot, and to continue the use of his crutches. These were very soon dispensed with, the leg having become as firm and sound as the other, the point of fracture being marked by a thick firm band of callus.—*Dublin Medical Press*, December 15th.

[Mr Burman appears to us to be perfectly justified in attributing in great part the altered action, which was set up in this case, to the influence of the galvanism.

The patient, who it seems was a strict disciple of Father Matthew, seems to have lacked the generous diet and moderate stimulation which is found so advantageous in the treatment of fractures; and we have no doubt that the ultimately successful treatment was much assisted by the improved diet which was recommended. It will be observed, however, that in twelve days after the commencement of the galvanic treatment, such action had been excited between the fractured ends of the bones, as to leave no doubt of its consolidation taking place, and in eight days more the deposit of callus was copious, and the union of the fracture firm. A period of three weeks having been found sufficient to procure such union in a false joint of fourteen weeks standing, appears to us satisfactory proof of the excitement produced by the galvanism having played no trifling part in the successful treatment.]

23.—*Irritable Bladder, with Spasmodic Stricture of the Urethra, dependent on the presence of Tape-worm in the Intestine.* By Mr Tufnell.—A man of temperate habits, aged thirty-seven, came under the care of Mr Tufnell on the 10th of June, complaining of excessive irritability of the bladder, with difficult micturition. He had enjoyed good health till about three months previously, when he began to suffer from the usual symptoms of dyspepsia, with irritation of the rectum and hemorrhoids. These symptoms increased, and to them were added tenesmus and frequent calls to make water, which was voided in a twisted jet, and accompanied by severe straining, but no pain. He received temporary relief from taking opium; but he became emaciated, and his health had suffered severely before he applied for medical assistance. A small bougie when introduced was arrested, and grasped tightly by a stricture at the membranous portion of the urethra, the probable result of an attack of gonorrhœa, from which he had suffered some years before. The urine was highly acid, and loaded with lithate of ammonia. The prostate was of natural size, but very sensitive to the touch.

The patient was ordered to rest in the recumbent position, to have a pint of tepid water injected up the rectum night and morning to relieve local irritation, and to take infusion of columba with tincture of hyoscyamus, and liquor potassæ. The bowels at the same time to be evacuated by castor oil.

Under this treatment he improved so rapidly, that he resumed his usual habits at the expiration of a week. His symptoms, however, immediately recurred, and were as immediately relieved by his resuming his former treatment, with the horizontal posture. A second speedy recovery was effected, but he returned in a few days suffering severely, and anxiously desiring an operation for his relief, being convinced that he suffered from urinary calculus.

The irritation about the anus had now greatly increased, and he was observed at the same time to be frequently rubbing

his nose, which suggested the idea of the possible presence of worms in the intestines. A purgative of turpentine and castor oil was accordingly administered, and the following morning a tape-worm measuring thirty feet was evacuated. All the former symptoms immediately subsided, the urine became clear and healthy, and the patient was soon restored to permanent health.—*Dublin Medical Press*, December 15, 1847.

24.—*Foreign Body in the Bladder—Fatal attempt at Extraction.* By M. ROBERT.—The following case is reported by M. Robert to the Surgical Society of Paris:—

A young man, three days previously to his applying for M. Robert's assistance, had introduced an ivory ear-pick into his urethra, which very soon after its introduction became the cause of extreme suffering. On a careful examination of the urethra no foreign body could be detected, but it was discovered, by means of a sound, to have entered the bladder. It was there repeatedly seized with the three-branched forceps, but the attempts at extraction were fruitless, as the body lay across the neck of the bladder.

It was agreed, on consultation with M. Heurteloup, that it should be broken, and if possible extracted piecemeal, and with this view a *brise-pierre tranchant* was introduced, and the ear-pick cut across. The following day the patient, with much satisfaction, showed to M. Robert a fragment of the ivory which he had voided with his urine, the appearance of which induced the belief that two fragments still remained within the cavity of the bladder. On the following day the patient had a shivering, which was speedily succeeded by a second rigor. M. Heurteloup now made a second attempt to reduce the ear-pick into smaller fragments, but failed in bringing the instrument in contact with any foreign body. During the night following this second operation, all the symptoms of acute peritonitis supervened, from which the patient rapidly sunk.

On dissection the peritoneum was found highly inflamed, the rectum was adherent to the posterior surface of the bladder on the left side, and an abscess had formed in the cellular tissue of this part. The internal surface of the bladder was inflamed, and the ear-pick perforating its walls, projected about three-quarters of an inch into the abscess.

From this case M. Robert draws the conclusion, that, when a foreign body like the above has found its way into the bladder, and it is determined to attempt the destruction of it by crushing, it is desirable to finish the operation at one sitting (that is, to reduce it into such small fragments that they may be expelled from the urethra), for fear of the pointed extremities, which are left, perforating the walls of the bladder.—*Journal de Médecine et de Chirurgie*, November 1847.

25.—*Remarkable Case of Suicide.* By Professor FENGER of Copenhagen.—The patient fired a pistol, loaded with pretty large shot, into his mouth. There was considerable laceration, but he went on very favourably for four days, when violent hemorrhage took place from the mouth and nose, which proved rapidly fatal. The *post-mortem* examination showed that a single shot had penetrated into the right sphenoidal sinus, and wounded the carotid on the side of the cella turcica.—*Bibliotek for Læger*, July, 1847.

VI.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

26.—*Chloroform in Natural Parturition.*—By Dr I. BROWN.—Mrs W——, aged forty, the mother of seven children, was attended in her eighth confinement by Dr Brown, consulting accoucheur to the Paddington Lying-in Charity. On arriving, he "found the os uteri dilated to the size of a crown-piece, but all the external parts dry and tense, the liquor amnii having been discharged many hours previously. The pains were severe, and not very efficient." Dr B. then administered the chloroform in the usual way. "I paid (Dr Brown adds) great attention to the practical and judicious remarks which Dr Simpson kindly gave me in a private note accompanying his pamphlet, viz. 'In midwifery, you do not require to keep the patient so *sound* and deep as in surgery, otherwise you will stop the pains; but she should be *so* deep as not to feel them. With chloroform, I give a few inhalations before each pain. In the interval, keep her just asleep, and no more.' Thus I found (he continues) every pain subdued as to the patient's suffering, but not at all as to its expulsive power." When the head descended to the perineum, Dr B. gave a larger dose, and the child, a fine male, was born without the

knowledge of the patient. She awoke in five minutes, hearing its cry. "The placenta came away entire in ten minutes, *whereas in all her previous labours she had always either hour-glass contraction, or retention from other causes.* The uterus contracted well and continued so; the patient had no bad symptom, either vomiting or headach. In all, I used only one drachm" (ounce?).—*Lancet*, p. 604, Dec. 4, 1847.

Other successful cases of the use of chloroform in natural labour, are recorded by Dr Lansdown (*Lancet*, January 1, 1848), Dr Protheroe Smith (*Lancet*, November 27, 1847), Dr Rigby (*Medical Times*, December 11, 1847), &c.

27.—*Objections made to the Use of Chloroform in Labour.*—Some communications have been published in the medical journals, fulfilling Dr Simpson's statement, that the use of chloroform in midwifery would of course meet with all "due and determinate opposition" from some members of the profession. Mr Grean of London (*Medical Times*, December 18) avows, "amongst the higher classes a general disgust for the use of either ether or chloroform is manifesting itself," and "great numbers have already expressed their abhorrence of the system of being relieved from pain!!" The same writer states *his* belief, that its relaxing effects upon the perineum and soft parts can be of no use in first labours; for "in first deliveries (says he) much more impediment is found in the pelvic *bones* and rigidity of *joints*, as evidenced in the labours of those advanced in years; and as pressure alone is able to cause these parts (the bones and joints) to yield, I do not see that much advantage can be gained by any relaxation that may be imparted to the soft parts." Such groundless assertions as the above we pass over without remark.

Dr Barnes of London (*Lancet*, December 25, 1847) insists, that the pains of labour, and the modifications of cry which the agonies of the patient force from her, are useful to show the progress of the labour, and that they thus afford us "valuable assistance in diagnosis and treatment;" and that, therefore, he is not to be "dragooned" into the practice of permitting his patients to pass through the process of parturition without their exhibiting to him the usual signs of torture.

[We would suggest to Mr Barnes, that all this diagnosis could be far more easily and certainly made out by what every man employs, the usual tactile examination, and we would further suggest to him, that such means would be much more humane. Ideas like those of Mr Grean and Mr Barnes, will read strangely some ten years hence.]

28.—*Chloroform in difficult Parturition.* By Dr Murphy.—E. G——, æt. thirty-six, has already borne six children. All her labours were extremely protracted.

In the present, her seventh confinement, labour commenced, Nov. 24, at six o'clock A.M. "About eleven o'clock on the following day (says Dr Murphy) I saw her, and found the os uteri nearly dilated, the vagina moist and cool, the head above the brim of the pelvis, the conjugate measurement of which was only two inches and a half. I felt satisfied that the head of the child could not descend into the pelvis; but allowed labour to proceed, in order to ascertain whether it might enter the brim sufficiently to be extracted by the forceps." After being thirty-eight hours in labour, with very strong and regular pains, no change took place in the position of the head. The inhalation of chloroform was then commenced, and quiet sleep was induced. Dr Murphy then perforated the head. When the perforator was withdrawn, the bones of the cranium overlapped each other, so that it was difficult to introduce the crotchet. After several manœuvres and vain efforts in traction, the head was at last made to pass the brim of the pelvis. At half-past nine o'clock P.M., the child was born, thirty-nine and a-half hours after the commencement of labour. The placenta was expelled in about ten minutes without any hemorrhage.

Her convalescence was steady and rapid, a "contrast to her previous confinement, from which she did not completely recover for some months."—*Dr Murphy, Lancet*, p. 653, Dec. 18, 1847.

29.—*Ovarian Tumour impeding the passage of the Child's head.* By Mr Hicks.—Mr Richard Hicks, surgeon, London, was called to Mrs P., who had been in lingering labour for twelve hours. Upon examining, he found a large tumour, which he supposed to be fibrous and ovarian, lying in the posterior part of the pelvis in such a manner as to preclude the possibility of the child's head passing without craniotomy. This operation was immediately performed, and then the inhalation of chloroform commenced (Mr H. could not procure any of it sooner). Dr Murphy delivered the infant with some difficulty. Chloroform was again administered during detachment of the placenta, which was adherent. Mr Hicks remarks, that

he does not recollect having seen any one who had had so severe a labour, arrive at so speedy a restoration to health.—*Lancet*, p. 42, Jan. 8, 1848.

[In this case, the safe precaution of puncturing the tumour *per vaginam* seems to have been omitted. The introduction of a small exploring needle (trocar and canula) would have decided whether or not the tumour contained fluid, and of what kind the fluid was. If the tumour was ovarian, this means might probably have evacuated its contents, and allowed the child to pass uninjured. The fibrous hardness of the tumour is no test, under such circumstances, of its containing fluid or not. Dr Ingleby (*Obstetric Medicine*, p. 125) relates a case in point, where the tumour was "so very tense as to feel like bone;" and where it was ascertained that, had it been punctured, the child would probably have survived.]

30.—*Turning substituted for Craniotomy and the Long Forceps. Chloroform-inhalation.* By Dr MURPHY.—Dr Murphy was called to attend a lady in labour with her twelfth child. All her former labours were more or less protracted, and in her last confinement the forceps were resorted to in vain, after labour had continued forty-eight hours. The cranium was then perforated, and the child delivered. "When it was removed, the arm of a second was found in the vagina, which was turned with much difficulty and saved."

On the present occasion labour commenced on Thursday, Dec. 2d. "On the following morning (says Dr Murphy) she sent for me, when I found the os uteri two-thirds dilated, the head of the child presenting at the brim, the passages cool, and the upper part of the sacrum easily touched by the fore-finger; the contraction from pubis to sacrum seemed to me to be about three inches. I hoped, therefore, that by allowing the labour to proceed, the head might advance sufficiently to be delivered by the forceps. . . . Nothing was done until the middle of the day, when I saw her about one o'clock. During this interval the pains were becoming very weak and inefficient; the pulse 100, weak and compressible; no advance in the presenting part, which was still in the brim of the pelvis. I determined to attempt the delivery by the forceps, and requested Dr Snow to commence the inhalation of chloroform. As soon as my patient was sufficiently under its influence, I proceeded to apply the long forceps in the transverse axis of the brim of the pelvis, over the head of the child; when the blades were locked, I gradually increased the extracting force to the utmost I could use, but without any effect; I was more than half an hour engaged in this, but to no purpose. Thus, finding my intentions defeated, and having, as I supposed, no other alternative, I proceeded to perforate the head, when the perforator, which had scarcely entered the cranium, pushed the head altogether above the brim of the pelvis. I withdrew the instrument, and feeling a hand of the child just over the pubis, I resolved to attempt to turn it. I got my hand and arm, with a good deal of difficulty, through the brim, seized the knee of the child, and brought it down, which being accomplished, I was enabled to bring down the remaining limbs more easily, because the cavity and outlet of the pelvis was just as wide as the brim was narrow. The extraction of the head, the great difficulty, was yet to be overcome, but by a steady and powerful effort I succeeded in disengaging it; the child (a boy) was born, to my great surprise, living, and is now doing remarkably well.

"Since the operation, this lady's recovery has been extremely favourable; and, comparing it with her last confinement, she says that she slept better, and felt far more comfortable on the following day. She had much less nervous irritation. She is also quite free from after pains, to which she had been subject in every previous confinement. . . . It seems to relieve the patient from the shock to the nervous system, caused by severe pain.

"This case (continues Dr M.), I think, also proves the importance of a rule proposed by Professor Simpson—that of turning the child where the long forceps fails in extracting it. [*See the No. of Journal for March* 1847, p. 718.] I should have no hesitation, in any future case similar to this, to make the attempt, if I could get my hand and arm through the brim of the pelvis."—*Lancet*, p. 654, Dec. 18, 1847.

31.—*On Placenta Prævia.*—By Dr MEADOWS.—Dr Meadows of Ottley, Ipswich, relates a case of this complication. The patient had had repeated discharges of blood during the two last months of her pregnancy. When labour came on, it was attended with excessive hemorrhage. The mother was completely exhausted and almost insensible, in consequence of which brandy and opium were administered. Dr Meadows, on examination, found the os uteri completely dilated, and the placenta entirely adhering to its circumfer-

ence. In about a quarter of an hour the placenta was detached. Immediately the hemorrhage ceased. A large dose of ergot was now administered, and the child was born, with the head foremost, in about an hour and a half. The patient recovered completely.—*Lancet*, p. 27, Jan. 1, 1848.

32.—*Rupture of the Womb during Labour, followed by Recovery.* By Dr Prassart.—A woman, thirty-seven years of age, after being about eight hours in labour, was suddenly taken with excessive pain in the abdomen. At the same time a noise was heard as of something cracking; the waters also were discharged. The uterine contractions were instantly stopped, and she became cold and collapsed.

Dr Prassart was called in and saw her six hours after the accident. She was at that time in the deepest prostration, and complained of extreme pain and tenderness in the belly. The forceps were then applied, and a dead child easily delivered, followed by a large discharge of blood. After removing the placenta from the cavity of the abdomen, several folds of intestine passed into the uterus. The subsequent details of the case are very imperfectly recorded. The woman, however, was able to leave her bed in four weeks, and afterwards recovered entirely. —*Casper's Wochenschrift*, No. XLI. 1847.

33.—*Spontaneous Rupture of the Uterus before Labour.* By Mr Browbill.—Soon after her first delivery, which was natural, this patient was seized with convulsions, and subsequently delirium, which, after continuing for a week, ended in puerperal mania, which was cured after eight months' confinement in an asylum.

In the beginning of the seventh month of her second pregnancy she had a violent fall, which, however, caused her no pain at the time, or subsequently. At the full period labour commenced, and was accompanied with vomiting. After several good pains, she felt as if something suddenly gave way inside, and immediately a discharge of liquor amnii took place from the vagina. The os uteri was nearly closed. After this the uterine contractions ceased, and she died on the third day after labour had supervened. Before death, she complained of severe pain in the middle of her back.

On the autopsy, the abdomen was found to contain about two pints of a dark bloody fluid. The fœtus, in the first stage of putrefaction, was found lying in the cavity of the peritoneum, entirely excluded from the uterus. The uterus was ruptured from the centre of the fundus as far as the os uteri. It was perfectly healthy, and firmly contracted over the placenta.—*Provincial Med. and Surg. Journal*, Dec. 29, 1847.

34.—*Imperforate Vagina occurring during Labour.* By Dr Ogden.—An interesting case of this nature is related by Dr Ogden. His patient had, when nineteen years of age, undergone an operation for retained menses, in the course of which the urethra was laid open; and, on cutting deeper, a quantity of thick grumous blood was evacuated. This artificial opening ultimately closed, and she menstruated afterwards through the urethra.

After being married for a period of ten years she fell with child. On labour supervening, Dr Ogden made a large incision between the urethra and rectum to the depth of an inch and a half. The membranes were unfortunately opened by the knife. The child was still-born. She became again pregnant two years afterwards, and the vagina was so rigid as to require the use of the scalpel. A living child was delivered.—*Record of Obstetric Medicine*, p. 34.

Another case, very similar to the former, was reported to the Manchester Pathological Society by Mr Dumville (*Medical Gazette*, Dec. 24, 1847). A young woman, nineteen years of age, was operated upon to evacuate the menses retained by a congenital occlusion of the vagina. The incision had to be carried to the depth of an inch. Six years after the operation she became pregnant, and was delivered at the full time. A rigid band of the vagina had to be cut through before the head of the child could make its exit. The mother made a good recovery.

35.—*Extreme Rigidity of the Os Uteri during Labour.* By Dr Buckingham and Mr Barrett.—The patient had already borne two children; both the labours were tedious and protracted. Dr Buckingham was called to attend her in her third confinement. On arriving, he found that the membranes were already ruptured. The pains were very severe. The os uteri was found low down, near the vulva; it was about the size of a dollar, thin in the edges, quite unyielding, and feeling as if formed by a wire. Tartrate of antimony was administered in nauseating doses, without effect. The pains continued very strong, and forced the head, still covered by the uterus, through the bony outlet of the pelvis. While the head rested upon the peri-

neum, Dr Buckingham incised the posterior lip of the uterus by means of a lancet, to the depth of one-eighth of an inch. The wound enlarged of itself, and the child was speedily delivered. The mother made a slow recovery.—*American Journal of Medical Sciences*, October 1847, p. 400.

Mr Barrett records a similar case. In this patient, when first examined, the os uteri was rigid and thick. On the second day the waters were discharged. In consequence of the persistence of this state of matters, the woman was several times bled and purged, and had tartar emetic in nauseating doses, as well as different enemata, and also the local application of belladonna to the os uteri. She was *unaccountably* left in this condition for five days, the pains being generally very severe, and ceasing only rarely while she enjoyed a few hours sleep. After being five days in this state, serious constitutional symptoms supervened, and it was judged necessary to resort to the knife. Two incisions were made in each side of the os uteri. The constitutional symptoms very quickly abated. Subsequently the child's head was perforated, and the woman safely delivered after seven days' labour. She recovered.—*Provincial Med. and Surg. Journal*, Dec. 15, 1847.

36.—*Hydatids from the Uterus.* By Dr BROWN.—Dr Brown relates a case of this description occurring in a woman who had borne four children, the youngest of which was two years old. When Dr Brown first saw her, she believed herself to be in the fourth month of pregnancy, and complained of a great discharge *per vaginam* of a dark-brownish colour, and most offensive odour. The uterus was enlarged to the size of that of the fourth month of pregnancy. These symptoms continued for a month, when profuse flooding came on. Dr Brown, on arriving, introduced his hand into the uterus, and took away a large quantity of coagula with hydatids. Of these last there were, at least, two quarts. The hemorrhage immediately ceased.—*Record of Obstetric Medicine*, January 1, p. 21.

[For some interesting pathological observations on hydatiginous degeneration of the ovum, we would refer to the reports of the Obstetric Society of Edinburgh, published in the number of this Journal for May 1847, p. 868.]

VII.—MATERIA MEDICA AND THERAPEUTICS.

37.—CHLOROFORM—*Preparation.*—M. Soubeiran recommends the preparation of chloroform from a mixture of ten parts of chloride of lime, sixty parts of water, and two parts of alcohol. The mixture is introduced into a large copper still, of which it must not occupy at most above two-thirds, and a brisk fire is applied to the apparatus. At about 176° Fahrenheit, a violent reaction ensues, and just at this moment the difficulty of the process consists, as the materials are apt to swell up and pass over into the recipient. It is necessary to watch it carefully at this point; and when the head of the still at its upper part becomes warm, although no fluid has begun to pass over, the fire must be withdrawn. Shortly after this the distillation commences and proceeds almost entirely of itself; but as soon as it begins to go slowly, the fire is re-applied. The distilled fluid does not amount to more than two or three litres, and consists of two layers, the lower of which is chloroform. It is purified by washing first with water, and then with solution of carbonate of soda, and finally by distillation over chloride of calcium. The proportions above described M. Soubeiran assures us are the most favourable for the preparation of chloroform; and in order to facilitate the process, and to save time, he recommends the chloride of lime to be mixed at once with hot water, by which means a considerable number of distillations may be performed in one day.—*Journal de Pharmacie et de Chimie*, December 1847.

M. Dervault recommends that the proportion of water proposed by Soubeiran should be diminished one-third. By this modification he asserts that four times the quantity of chloroform are obtained than by the process of Soubeiran.—*L'Union Médicale*, December 18, 1847.

The above process is understood to be the one generally adopted. It is, however, not free from danger; and serious accidents have occurred. (We find the following remarks in the *Pharmaceutical Journal* for January 1, 1848). "The materials introduced should not occupy more than one-eighth of the still, and not two-thirds, as Soubeiran directs; otherwise the still-head may be blown off with violence, and the apartment filled with chlorine vapours. Perfectly good chloride of lime should be used, otherwise the product will be very small.

Chemical Characters and Tests.—The chloroform is obtained first as a dense oily-looking liquid. It is purified by treating it with oil of vitriol and carbonate of baryta or of potash, and by subsequently distilling from chloride of calcium, after washing it repeatedly with water. It may yet, however, retain a minute portion of alcohol, the presence of which is detected by the following very delicate test proposed by Mialhe:—"Put some distilled water in a test tube, and drop into it a small quantity of chloroform; if the chloroform be pure, it remains transparent at the bottom of the tube, but if alcohol be present, the chloroform acquires a milky opacity." Mialhe supposes the alcohol in the chloroform to be in the anhydrous condition, and that the milkiness which ensues on the addition of water, is occasioned by the hydration of the alcohol. This test will detect the admixture of one-thousandth part of absolute alcohol. It is feared, however, that it will be inapplicable in warm weather, as a slight increase of temperature, such as the warmth of the hand, causes the milkiness to disappear. Probably the presence of alcohol to a small extent will not interfere with its therapeutical properties.

When pyroxylic spirit is substituted for alcohol in the preparation of chloroform, the product has a disagreeable taste and smell, and is unfit for medicinal use.

Mialhe enumerates the following among the chemical properties of chloroform:—"It rapidly evaporates, producing great cold when dropped on the skin. It has neither an acid nor alkaline reaction, but is perfectly neutral when pure. It is easily dissolved by alcohol and ether, but is again separable by water. It readily deoxidizes nitric acid by the aid of a moderate heat; gold is not dissolved by this mixture, hence no hydrochloric acid is formed, and no chlorine is evolved. Chloroform does not dissolve gold, nor does it bleach vegetable colours; hence, it contains no free chlorine. Potassium floats in it without decomposing it, and no gas is evolved. It forms a milky liquid, but does not enter into combination with caustic potash." It is not inflammable, but it causes alcohol to burn with a yellow smoky flame. Chloroform mixes and combines with the essential oil of turpentine and bisulphuret of carbon. It dissolves camphor, caoutchouc, amber, resins, iodine, and bromine.—Taylor, *Med. Gazette*, December 24, 1847.

Dr Snow has furnished the following table, representing the quantity of chloroform vapour that the air holds in solution at different temperatures:—

Quantity that 100 cubic inches of air will take up.

Temp.	Cubic Inches.
50°.....	9
55°.....	11
60°.....	14
65°.....	19
70°.....	24
75°.....	29
80°.....	36
85°.....	44
90°.....	55

Hence, an elevation of 15° in the warmth of the apartment, doubles the quantity of vapour taken up by the air, and consequently the amount which would be inhaled in a given time.—*Medical Gazette*, December 10, 1847.

Physiological Action—(a) On Animals.—M. Gruby, in a communication to the Academy of Sciences, announces that the effects of chloroform vapour on dogs and rabbits are as follows:—1. "That during inspiration the arterial blood retains its florid colour, and if, under asphyxia, it assumes the dark venous character, the red colour is speedily restored. 2. That a part of the animal, a limb for example, separated from the body, and exposed to chloroform or ether vapour, becomes insensible. 3. That if the member be removed from the vapour, sensibility is restored. 4. That during the inspiration of chloroform vapour, the number of respirations increases with the degree of insensibility produced. 5. That animals may be kept in a state of insensibility for several hours, and afterwards restored, if the inspiration of the vapour be occasionally interrupted. 6. That, on the other hand, rabbits, dogs, and frogs, die suddenly in from one to four minutes after respiring the vapour, if the dose of chloroform is from 46 to 60 grains, and the inhalation be uninterrupted."—*Medical Gazette*, December 24, 1847.

Mr Thomas Wakley has performed an extensive series of experiments with chloroform and ether on the lower animals (dogs, cats, rabbits, rats, mice, pigs, hedgehogs, horses, and birds). The chloroform and ether were administered by inhalation. Mr Wakley's researches show:

1. That there is no important difference in the effects of chloroform when inhaled by the various animals above enumerated.

2. In fatal experiments with the chloroform, the symptoms were quick breathing,

muscular weakness, showing itself first, as generally happens, in the hind legs, foaming at the mouth, dilatation of the pupil, and congestion of the conjunctiva. As the experiment advanced, the breathing became slow and laborious, there was complete insensibility and muscular prostration, loss of reflex action (indicated by the absence of winking on irritating the cornea), and finally death by asphyxia, the heart's action continuing for some minutes after the cessation of the respiration. Death occurred in a period, varying from three to eleven or more minutes, according to the strength of the animal, or the amount of chloroform used.

The post-mortem appearances are not mentioned in connexion with the experiments; but in a concluding remark, the author states that intense venous congestion was found in the lungs, heart, and great vessels.

3. The symptoms, as well as the post-mortem appearances, enjoin caution in administering the chloroform to individuals labouring under congestion of the lungs, or any disease of the heart, or great vessels, which obstructs the free circulation of the blood. It has yet to be shown whether in such cases we might not obtain the anæsthetic effects without the engorgement of the lungs by the introduction of the vapour into the rectum.

4. The chloroform acts with greater energy in young and weakly than in old and strong animals. Thus, in experiment 9, a strong dog, though made to inhale three drachms during eleven minutes, recovered readily, while in experiment 12, a weakly puppy about eight months old died from the effects of inhaling one drachm during three and a half minutes. This fact is important in a practical point of view, as, undoubtedly, great caution ought to be observed in administering chloroform to very weak individuals, or to young children, in whom it will probably be found that a much smaller quantity than is usually necessary, will be sufficient to induce the anæsthetic sleep.

5. The animals offered much less resistance to the administration of chloroform than to that of ether; indeed, they even seemed to like the former.—*Lancet*, January 1, 1848.

We are still in want of a series of experiments illustrating the action of chloroform when introduced into the lungs, stomach, rectum, cellular tissue, serous cavities, and bloodvessels. It should be used both in the state of vapour and of liquid. It is in this way alone, that we shall ever be able to arrive at a knowledge of its *modus operandi*.

6. (*b*) *On man.*—Some (Gerdy, Lankester) have alleged that *nausea and vomiting* follow more frequently the use of chloroform than of ether, but this is opposed to the general experience. *Violent convulsions and delirium* have occurred in several cases—Holt, Beales, Stapleton.—*Medical Gazette, December* 1847.

Therapeutical Uses.—During the last month, the British and Foreign Journals teem with the records of cases in surgery and midwifery, illustrating the value of chloroform as an anæsthetic agent. In *medicine* its applications are daily extending. Its success in *spasmodic asthma* has been most satisfactory. In a severe case, where ether had been previously used without advantage, it afforded immediate relief.—Greenhalgh, Chandler, *Medical Gazette*, December 1847. In two cases of *traumatic tetanus*, it has displayed an undoubted influence over the disease, and, though both cases terminated fatally, we are convinced that chloroform promises more service in this intractable malady than any remedy hitherto proposed.—Velpeau, D'Ivonneau, *L'Union Médicale*, December 1847.

38.—*Ammonia as a Remedy in Asthma*—M. Rayer has recently published his experience of the effects of strong water of ammonia applied to the velum palati for the cure of asthma. M. Monneret and others had previously employed this mode of treatment; but they applied the caustic to the back part of the pharynx, and in some instances death had nearly ensued from suffocation, owing to the action of the volatile alkali on the glottis. M. Rayer's method of employing this remedy is as follows:—he dips a roll of lint, about the length of the middle finger, in a mixture of four parts of strong aqua ammoniæ and one of water, pressing out the superfluous liquid, and immediately applies it for a few seconds to the velum palati, as if about to cauterize the part. The patient is immediately seized with a feeling of suffocation; a fit of coughing ensues, with much expectoration, and this is soon followed by a great feeling of comfort and facility of respiration. Should any return of the fit occur on the day following, the ammonia is again applied. The degree of tolerance of this remedy by patients varies very much; it is, therefore, always well to use it weak at first, which is easily done by moving the piece of lint, dipped in the solution, three or four times rapidly through the

air, and then smelling it, when the strength is readily ascertained. In M. Rayer's experience, extending to over a hundred cases, a single application rarely failed to afford relief, and in many instances prevented a return of the attack for three or four months. This mode of treatment is alone applicable to simple or idiopathic asthma, that form which is so often dependent on emphysema, and is attended with catarrh; it has, nevertheless, afforded relief in some cases of symptomatic asthma.—*Annales de Thérapeutique de Regnetta*, November 1845.

[We had an opportunity in Paris of seeing several cases of asthma relieved by Rayer's mode of applying the caustic ammonia. It is our opinion, however, that the practice is not unattended by danger.]

39.—*Ricord's Treatment of Gonorrhœa—Action of Copaiba.* If the patient be seen within the first twenty-four hours, M. Ricord recommends the immediate injection of a strong solution of nitrate of silver, (15 grs. of the nitrate to an ounce of distilled water). In many cases, one injection suffices for this abortive treatment, in others a second may be necessary after an interval of two days.

At the same time copaiba and cubebs are administered internally in large doses. M. Ricord observes, "The injections modify, and create a new action in the mucous membrane, and copaiba and cubebs, by yielding their principles to the urine, contribute powerfully in rendering that modification more effective." He considers copaiba the most important of the internal remedies against gonorrhœa, and treats of its action under three heads:—

1. *Revulsive action.*—When copaiba acts on the bowels, it may bring about a revulsion on the intestinal canal, and thus possibly establish a cure; it then acts like any other purgative, as colocynth, &c. But you must not trust to cures thus obtained, for it often occurs, that when the revulsion ceases, the blennorrhagia returns; so that I would lay it down as a general rule, that the purgative action of copaiba is not to be sought for, when we administer this substance against blennorrhagia.

2. *General action on the system.*—The blood being modified by the principles of the copaiba, may, in its passage through the textures of the mucous membrane, act upon it in a peculiar manner; but it is plain that this mode of action is very feeble, since those varieties of blennorrhagia, which have not their seat within the urethra, are in nowise benefited by its administration.

3. *Direct anti-blennorrhagic action.*—Copaiba, after being taken up by the torrent of the circulation, is elaborated in the kidneys so as to acquire new properties. Thus it is that the urine of persons who are using copaiba has a peculiar smell, very easy of recognition for those who have had practice in these matters. This principle, the result of the renal elaboration, is contained in the urine, and it is by means of this peculiar element that the affected surfaces become modified.

M. Ricord has seen several cases of gonorrhœa in individuals who had a urethral fistula, and in whom the internal use of copaiba succeeded in controlling the discharge which issued from that portion of the canal which was situated posteriorly to the fistula, namely, that portion placed under the influence of the urine—*Lancet*, December 1847, p. 617.

40.—*Action of Nitrate of Silver on the Liquids and Solids of the Body*: By KELLER.—The use of this salt as an external application in affections of the mucous membranes of the eye and of the generative organs is generally allowed. These effects, says our author, are easily explained by the property which the salt possesses of destroying the vitality of the parts with which it comes in contact. Further, it decomposes the chloride of sodium and the soluble phosphates, so that there are formed two insoluble salts, the chloride and phosphate of silver. The frequent application of this salt to the epithelial cells of the mucous membranes, not only causes their rapid separation, but also their rapid and abundant reproduction.

The mode of action of the salt, when taken internally, is not by any means so clear. From seven experiments, in which the blood, urine, and fæces of patients who had taken large doses (3 to 12 grains daily) for some months were examined, he was led to the conclusion that the whole was removed, in the form of chloride of silver, with the fæces. From a direct examination of its action on the gastric juice, he concludes that the whole is at once converted into chloride of silver, and consequently that no portion enters the circulation; he even goes so far as to regard the well-known change of colour as merely fortuitous. We need hardly state that the coloration in these instances is too certain to be doubted; we have far better evidence of *its* truth than that of Keller's

accuracy. That the quantity entering the blood is *extremely* small, we do not doubt. In fact, similar experiments were made some time ago by Heller, with the same results.—*Half-Yearly Abstract*, Vol. VI. from *Jour. de Pharm.* December 1846.

[Dr Hebra informed us that the nitrate of silver has been administered to upwards of forty epileptics in the General Hospital of Vienna. Large doses were given, and in many of the individuals, the use of the drug was continued for several months. The disease was in no case benefited, nor was the slightest tendency to coloration of the skin ever observed.]

41.—*Di-Arsenite of Quinine.*—This substance has been found by Dr Kingdon very efficacious in the treatment of chronic skin diseases. A cure was obtained by its use in a case of lepra, in which the liq. potassæ arsenitis had failed. Dr Kingdon believes that it will be found equally useful in ague, tic-douloureux, and neuralgia. The dose is one-third of a grain twice a-day. It is prepared thus:—He dissolves 64 grains of arsenious acid, and 32 grains of pearl-ashes, or sub-carbonate of potassa, in four ounces of distilled water, by boiling it for about half an hour, and then makes it up to four ounces with as much water as may be required, so that each drachm may contain two grains of arsenic. He adds five drachms of this solution to two scruples of di-sulphate of quinine, previously dissolved in boiling water; immediately a white curdy precipitate is formed, which is the di-arsenite of quinine.—*Provincial Medical and Surgical Journal*, Aug. 1847.

42. *Rhatany.*—Between the Cordilleras and the Andes, at the height of 12,000 feet above the sea, there are vast tracts of uninhabited table-lands. These are called in the Quichua language, the Puna. The aspect is singularly monotonous and dreary. The expansive levels are scantily covered with grasses of a yellowish-brown hue, and are never enlivened by fresh-looking verdure. Here and there, at distant intervals, may be seen a few Quenua trees (*Polylepis racemosa*), and large patches of ground covered with the Ratanhia shrub, (Krameria triandria.)

From the most remote times, the Ratanhia has been employed by the Indians as a medicine. It is one of their favourite remedies against spitting of blood, and dysentery.

Most of the Ratanhia exported to Europe, is obtained in the southern provinces of Peru, particularly in Arica and Islay. The extract which is prepared in Peru, and which was formerly sent in large quantities to Europe, is scarcely an object of traffic. For several years past, no Ratanhia has been shipped from Callao, and but very little from Truxillo.—*American Journal of Medical Sciences*, July 1847, from *Dr Tschudi's Travels in Peru.* The decoction of the Rhatany root, administered in the form of injection, is very valuable in the treatment of internal hæmorrhoids, as we have often had occasion to observe in the hospital practice of Professor Trousseau, Paris.

43.—The *Chenopodium olidum* (Stinking Goose-foot), *in Amennorrhœa.*—An extract of this plant is recommended by Mr Houlton, in the treatment of amennorrhœa. He gives from five to ten grains in the form of pill, night and morning, for a fortnight previous to the expected return of the catamenia.—*Medical Times.*

43.—*Cutaneous Eruptions induced by various Medical substances—Opium.*—The eruptions which in certain individuals follow the use of the preparations of opium, are always of an exanthematous nature. In general they consist of red isolated patches, not unlike those of measles. This kind of eruption is rare.

The *Solaneæ.*—The eruptions induced by the ingestion of the preparations of this tribe of plants are also of the order exanthemata, and are as uncommon as those which are the effect of opium. The patches are larger and irregular, resembling scarlatina.

The *Oleo-resins.*—All the medicinal substances of this class are liable to be followed by cutaneous eruptions, but none so frequently as turpentine and copaiba. The eruption very much resembles that produced by opium and belladonna, being sometimes measly, at other times scarlatinous in its appearance. It is a rare exception to see either vesicles, pustules, or papules.

Cod-liver oil.—This medicine sometimes gives rise to a form of eczema, which appears generally about the fifth day from the commencement of its use; it is, however, rarely observed.

Iodide of potassium.—The eruptions which follow the use of this medicine are far from uniform, sometimes being eczematous, at others pustular, as in acne. It sometimes happens that the skin escapes the action of the medicine, and that the mucous membranes are attacked instead; in such cases we observe coryza and con-

junctivitis, which cease as its use is suspended, but which will not yield to topical treatment as long as the medicine is persisted in.

The discrimination of the cutaneous affections which are induced by different medicinal substances taken internally, is of no slight practical importance; we have seen ignorance of these characters and causes give rise to very unpleasant mistakes.—*American Journal of Medical Sciences, from Annuaire de Thérapeutique*, 1847.

45.—*Citrate of Magnesia.*—This salt has been proposed by M. Rogé Delabarre as a substitute for the sulphate of the same base. It purges like the sulphate, but is entirely devoid of its bitter taste.

The process recommended by Delabarre, is objected to by M. Garot as being tedious and expensive. The following is Garot's formula:—

R. Carbonate of magnesia,	-	15 parts
Citric acid,	- - -	22 ...
Aromatic syrup,	- -	60 ...
Water, - - -		500 ...

The acid and carbonate are separately prepared, and afterwards mixed, as with the ordinary Seidlitz powder. The proportions in grammes (15 grains) form a dose.—*Journal de Médecine et de Chirurgie*, September 1847.

46.—*How to conceal the bitter taste of Sulphate of Magnesia.*—M. Combe has shown that this may be effected by the addition of tannin (one and a half grains to the ounce of salt), or still better by the use of roasted coffee. He recommends the following proportions; water, 16 oz.; powder of roasted coffee, 2½ drachms; sulphate of magnesia, 1 oz. The mixture is boiled for two minutes, and afterwards strained. The coffee acts in virtue of the tannin, which it contains. Tea answers the same purpose, but not so well.—*Jour. de Pharmacie*, August 1847.

47.—*Benzoate of Ammonia in Gout.*—Dr Seymuor (Thoughts on Several Severe Diseases, &c.) has found this medicine of decided service in cases where the small joints were red and swollen, or where fluid was deposited in the joint of the great toe, and also in cases where the lithate of soda existed in the joints of the fingers. He has found it a valuable diuretic. It is especially useful in cases where nausea and occasional vomiting, or the existence of diarrhœa, prevent the employment of other diuretics.

Ergotin (?) *a Styptic.*—M. Bonjean has established by experiments on animals the efficacy of a watery solution of ergotin (one part ergotin to ten of water) as a styptic in constringing the capillary vessels and arresting hemorrhage. MM. Bonnet and Petrequin have found it equally useful in man. They cite two cases—one of hemorrhage consequent on gangrene of the leg, and another of secondary hemorrhage following an operation on the face—in which its use was eminently successful.—*Comptes Rendus*, October 1847.

According to M. Sée, the ergot of rye and ergotin have no influence in internal hemorrhages not connected with parturition. He administered the ergotin in eleven cases (three of menorrhagia, six of hæmoptysis, one of hæmaturia, and one of intestinal hemorrhage) without obtaining any benefit.—*L'Union Médicale*, 27th November 1847.

VIII.—FORENSIC MEDICINE AND TOXICOLOGY.

48.—*Case of Attempt at Murder by pouring Melted Metal into the Ear.* By M. Bovs de Loury.—The mother of an idiot son thought to get rid of him by pouring melted lead into his ear during sleep. The pain and inflammation so produced were violent, yet the boy recovered and the mother was delivered up to justice. The authorities proposed the following questions:—1. Can melted metal (lead or tin) poured into the ear cause death? 2. If so, what was the cause of the failure in this instance? The medical men applied to found by experiment, that tin heated to its point of fusion and poured into the ear penetrates merely into the cavity of the tympanum without destroying the membrane; that melted at a high temperature the membrane of the tympanum is completely destroyed; that the metal penetrates into the mastoid cells, and into the bony canals which open at the base of the cranium. They concluded, that tin fused at a high temperature, introduced into the ear and reaching the brain, must cause death; and that, in the case submitted to them, the failure was probably owing to the low temperature of the metal, the abundance of the cerumen, and the resistance of the victim.

These experiments were repeated by M. Boys de Loury, but with a different result. He found that it is difficult to introduce a quantity of fused metal into the ear, because, whatever be the temperature of the metal, the expansion of the air contained in the meatus expels it. Nevertheless he succeeded, by taking precautions, in introducing a portion of fused metal, and in no instance did the bones of the ear, the mastoid cells, or the labyrinth, suffer from the effects of the heat,—and it never reached the dura mater. M. Boys concludes, that the pain from such an attempt in the living body, and the consequent inflammation, must be most violent; but he is not of opinion that it is capable of destroying life.—*Annales d' Hygiene*, No. 76.

49.—*Case of Poisoning by Aconitina.* By Dr Golding Bird.—The subject of this case, a person of station in society, and of high intellectual attainments, swallowed about two grains and a half of aconitina, procured by his own prescription from one of the most respectable druggists in London. He was not discovered for some time after the poison must have been taken: it seemed probable, however, that either from the poison, or from a severe blow received on the head in falling, violent vomiting had immediately ensued, as the room was flooded with vomited matter. After a period of not less than eight hours from the swallowing of the poison, the patient was found fearfully collapsed; the surface cold and sweating; quite pale; the heart's action scarcely perceptible; pupils acting to light; no paralysis whatever either of sensation or motion; intellect unimpaired; repeated and terrific vomiting of a brownish fluid, the act being produced by a sudden jerk of the abdominal muscles and diaphragm, recurring every minute or two. The attempt to swallow produced a spasm like what is described in hydrophobia. The hot bath, a large mustard poultice over the stomach, and a turpentine enema, produced no immediate effect, yet a gradual improvement took place. The impediment to deglutition still prevented the administration of internal remedies. Enemata of beef-tea with yelk of egg and ten minims of laudanum were ordered during the night. The night was severe from spasm and exhaustion. On the forenoon of the next day he was pronounced convalescent.—*Lancet*, January 1st, 1848.

[Though numerous cases of poisoning with the root of aconite, and some even with the leaves (*Northern Journal of Medicine*, vol. I. p. 120) have been recorded, the above case is the first distinct statement with which we are acquainted, of the effects of a poisonous dose of aconitina. Pereira mentions that the life of an old lady was endangered by so small a dose as the 1-50th of a grain. And it may be regarded as a settled point, that the internal administration of aconitina is too dangerous an experiment to be countenanced by men of ordinary prudence. Dr Fleming considers that aconite may cause death; 1. by producing a powerfully sedative impression on the nervous system; 2. by paralysing the muscles of respiration, and causing asphyxia; and 3. by producing syncope. (An Inquiry into the Properties of Anconitum Napellus. 1845, p. 43.) The symptoms reported in the case before us, as produced by aconitina, so far coincide with those usually arising from a poisonous dose of aconite; so that we can hardly agree with Dr Bird, that any thing likely to be characteristic of aconitina as a poison is here discoverable. Of this nature, Dr B. seems disposed to consider the convulsive vomiting and imperfect hydrophobia; but these symptoms, well marked as they were in Dr B.'s case, are but aggravations of the severe vomiting and constriction of the throat, observed in the effects of aconite itself and other poisons; and this increase of intensity in these symptoms may be suspected to have arisen, as much from the peculiarities of the patient's constitution, as from the nature of the poison.]

50.—*On Poisoning by the Extract of Belladonna.* By MM. Bayard and Chevalier.—Four cases of poisoning by the extract of belladonna, are reported in a recent memoir, three accidental and one by design. In all of them pretty much the same symptoms were observed; namely, dilatation of the pupils, disturbed vision, uneasiness, hallucinations, incoherence of purpose, dryness of the throat. In three of the cases a cure took place under the effect of blood-letting and purgatives; in the fourth death occurred on the seventh day after the poison was taken. In this last case, however, it was impossible to say what share the poison had in the fatal event, as the narcotic symptoms had disappeared, and signs of a typhoid character had arisen, which continued till death took place.—*Annales d'Hygiene*, No. 76.

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

VOL. I. MARCH 1848. No. II.

I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

51.—*Interosseous Nerve of the Leg.*—Dr H. J. HALBERTSMA has described the branch of a nerve which is distributed in the interosseous ligament of the tibia and fibula. This *interosseous nerve of the leg* arises along with the *popliteus nerve* and some other branches from the *tibialis nerve*, opposite the semilunar cartilages of the knee-joint. After running from one to two inches in the posterior surface of the interosseous ligament, it enters among its fibres, in which it becomes embedded, and at last terminates upon the lower fibulo-tibial articulation. In this course downwards, it gives off several branches, which can be traced to the periosteum of the tibia and fibula. That these filaments were really nerves, and not threads of areolar or fibrous tissue, was proved by the microscope. The trunk and branches of this nerve are not accompanied by branches of bloodvessels where they adhere to the interosseous ligaments, while those branches that are ramified on the surface of the tibia and fibula are accompanied by bloodvessels. The primitive fibres of this interosseous nerve, for the greater part, belong to the sympathetic system, the cerebro-spinal fibres being few in number. As the popliteus nerve distributed in the popliteus muscle consists chiefly of cerebro-spinal fibres, and the nerve which accompanies the medullary artery of the tibia is composed almost entirely of sympathetic filaments, the interosseous nerve is intermediate between these two in this respect. From the time of Morgagni and Haller up to very recent times, the presence of nerves in the fibrous tissues was disbelieved. Arnold, Schlemn, Varrentrapp, Bidder, and others, have described small filaments of nerves in the dura mater, though they are not agreed upon the source from which they come; and Purkinje and Pappenheim have detected nerves distributed in, and terminating upon, the periosteum and tendons of muscles.—*Müller's Archiv.* Heft. iv. 1847.

52.—*On the Structure of the Human Retina.* By ERNEST BRUCKE.—The retina is, on an average, 0·08 of a millimeter thick, is transparent as glass during life, but becomes of a dirty white colour after death. It consists of two parts intrinsically different,—of the *light-perceiving apparatus* of the eye, or the *tunica nervea*, and of the *catoptrical apparatus* of the eye, or the *layer of batoon-like bodies* (stratum bacillosum). The tunica nervea is placed next to the vitreous humour, the stratum bacillosum below the tunica nervea, and next the choroid coat. The *tunica nervea* is a part of the brain situated in the eyeball, and the optic nerve is a band of brain-fibres, by which the brain in the eye communicates with the brain within the cranium. The *tunica nervea* consists of four distinct layers. The most internal, or that next the vitreous humour, is a very thin membrane, termed the *membrana limitans* by Pacini, and, when acted on by acetic acid, is seen to be formed of six-sided cells. The second layer consists of the expanded fibres of the optic nerve, is thickest where the nerve perforates the sclerotic coat, and becomes thinner as it proceeds forwards. The third layer is formed of *brain-cells* embedded in soft fibres, similar to those which bind together the nervous fibres in the nervous chords. These cells have a diameter from 0·01 to 0·02 millimeters, are round like a ball, are in the fresh state translucent like drops of oil, and each generally contains a nucleus, occasionally two. The fourth and last layer is 0·025^{mm}

thick, and is composed of granules or nuclei (Körnerschicht oder die nuclear formation). These granules consist of irregularly rounded bodies, measuring from 0·006mm to 0·008mm in diameter, and generally present a dark spot in their centre. Some of these are of a yellow colour, and constitute the yellow spot in the axis of the eyeball. The tunica nervea has its proper vessels, which are spread out between the membrana limitans and the layer of nervous fibres on the second layer described above. These form a pretty close network, and the blood is brought to the arteria centralis retinæ, and carried from them them by the vena centralis retinæ.

The layer of *batoon-like* bodies (apparently the same as the membrane of Jacob) resembles perpendicular palisades closely set together, each measuring from 0·027mm to 0·030mm in length, and 0·0018mm in thickness, and composed of materials which reflect light strongly. One end of these batoon or rod-shaped bodies is covered by the *granular layer* of the tunica nervea, the other end is imbedded in the layer of pigment cells (pigmentum nigrum) on the inner surface of the choroid. When the light passes through the tunica nervea, it is reflected back again through it by the stratum bacillosum, and again excites it. Pacini has described a layer additional to these observed by Brücke. He calls it the layer of the grey nervous fibres, from being composed of these fibres, and says that it is placed between the layer of *brain-cells*, or *ganglion-globules*, and the *granular* layer; but Brücke failed in finding this layer, and, therefore, calls its existence in question.—*Anatomische Beschreibung des Menschlichen Augapfels.* Berlin, 1847.

53.—*On the Disposition of the Ramifications of the Extremities of the Bronchi.* By M. ALQUIÉ of Montpellier. Read to the French Academy of Medicine.—M. Alquié uses metallic injections to show the ends of the bronchial tubes. The results of his demonstrations are as follow:—1*st*, The bronchi divide progressively in the pulmonary tissue, forming main ducts, from the sides of which a large number of very small canals diverge; this subdivision is larger in man than in animals; 2*d*, The number of bronchial ramifications has no relation to that of the dilatations which terminate them; 3*d*, These terminations are vesicles having in general a long diameter of $\frac{1}{10}$th of a line, oval in form, and having an even and flattened surface, where they lie in contact with one another; 4*th*, These vesicles are sometimes solitary, and are then laterally connected with the bronchial ramifications: more frequently they are 5, 6, or 9 in number, and are developed at the end of a small bronchial tube; 5*th*, These vesicles have proper parietes, are isolated at many points, and communicate in many of the lobules with others.—*Archives Générales de Médecine*, December 1847.

54.—*On the Origin and Development of the Vegetable Embryo.* By Mr A. HENFREY.—In the Report on the Progress of Physiological Botany, we find the following observations, which are of considerable interest from the light they may throw upon the corresponding processes in the animal kingdom. The "vexed question" on which botanists in general have of late years been unable to form a satisfactory opinion, so contradictory and well-balanced has been the evidence for the various hypotheses, appears now somewhat nearer to a decisive settlement, since within the last year we have had no less than four elaborate and comprehensive essays presented to us, detailing the whole series of changes which the ovule passes through, from the opening of the bud to the ripening of the seed. When the names of Amici and Von Mohl appear as the authors of two of these papers, it will be understood how important these new investigations are; and the fact of the agreement of all four *inter se*, excepting in some trivial points, and the possibility of reconciling their results with the appearances which have presented themselves to authors holding different views, will probably cause them to be regarded as tolerably conclusive. The great result at which all these recent writers have arrived is, that Schleiden's statement, viz. that the end of the pollen-tube becomes the embryo, is incorrect, and that the old opinion, which regarded the pollen as the source of a fertilizing matter, necessary to stimulate the embryo-sac to the development of the germ of the future plant, is true; the pollen-tube being consequently merely the agent for the conveyance of the fertilizing matter through the style and the foramina of the ovule, having its progress arrested upon the outside of the wall of the embryo-sac, through which, and the membrane of the pollen-tube itself, the fecundating fluid is supposed to be imbibed.

55.—Mr PAGET *on Nutrition.*—According to Treviranus, while each organ nourishes itself, it removes from the blood certain constituents, which leave that fluid in a state more fit for the nutri-

tion of other parts; and the consequence of the existence of certain materials in the blood, is the formation of an organ or structure, into the composition of which those materials enter. Thus, when one kidney is destroyed, the other often becomes larger, does double work, as it is said, and the patient does not suffer from retention of urine in the blood. The meaning of this, according to Mr Paget, is, that as the principal constituents of the urine are ready formed in the blood, and are separated through the kidneys by the agency—that is, by the development, growth, and discharge of the renal cells—it will happen, that if one kidney be destroyed, there must, for a time, be an excess of the constituents of the urine in the blood; for, since the separation of urine is not mere filtration, the other kidney cannot at once, and without change of size, discharge a double quantity. The kidney therefore grows; more renal cells develop and discharge and renew themselves: in short, the existence of the constituents of urine in the blood, induces the formation of renal substance. These two hypotheses, "firstly, that the blood is definitely altered by the abstraction of every material necessary for the nutrition of a part; and secondly, that the existence of certain materials in the blood induces, or at least favours, the formation of corresponding tissues; it seems to follow as a reasonable hypothesis, that the order in which the several organs of the body appear in the course of development, while it is conformable with the law of imitation in the parent, and with the law of progressive ascent towards the higher state of being, is yet (at least in part, and this part more directly) the result of necessary and successive consequences." Thus, the formation of one organ, or series of organs, induces or supplies a necessary condition for the formation of others, by the changes successively produced in the composition of the material from which they all take their nutriment. In illustration, Mr Paget refers to the coincident development of hair on certain parts of the body, and of the genital apparatus, as well as to the perfection of plumage at the period of full activity of the reproductive organs of the bird, particularly in the male. Further, in man, when the development of the genital organs is prevented, that of the beard, and all the other external characters is, as a consequence, hindered; in birds, when the breeding season ends, and the several organs pass into their periodic atrophy, the plumage assumes paler and more sober colours, characteristic of barrenness. The development of the antlers in the deer offers another illustration. Thus, when two or more organs are connected in nutrition, but not in external office, their connexion arises because one is partly formed of materials left in the blood by the formation of the other. Thus, also, may be explained the commensurate development of many other organs which, in their function, appear unconnected, such as the thymus gland, and the air-breathing organs; the thyroid gland and the brain; the spleen and pancreas; and the embryo and the mammary gland of the parent.—*Medical Gazette, and condensed from Ranking's Abstract*, January 1848.

56.—Researches on the influence of Salt added to the Food on the Development of Cattle. By M. Boussingault.—Some time since Boussingault published the commencement of some researches upon this subject, which tended to show that the influence of common salt, as an article of diet, is much less than is generally supposed. The experiments were made by selecting two lots of cattle and supplying them with a fixed quantity of food; in the one lot with, and in the other without, an addition of salt. The cattle were weighed previously to the commencement of the experiment, and again at its conclusion, and it was found that the gain in weight of the two lots, was scarcely appreciably different in amount. The author has extended these experiments in the present paper; so that one of the lots of cattle has now been thirteen months deprived of salt, and his former results are fully confirmed. He has found that the consumption of 100 kilogrammes of hay, caused an increase of 7·19 kilogrammes of weight on those which were supplied with salt; and of 6·83 in those which got none. This difference is extremely trifling, and it is probable that it would be as great, or even greater, between different lots fed in precisely the same manner; and in an economic point of view, M. Boussingault observes, that the trifling gain in the former lot would not cover the expense of the salt with which they were supplied.

It is remarkable, however, that though the absence of salt excited no influence upon the growth of the cattle, it had a well-marked effect upon their general appearance, In those which were deprived of salt, the coat became rough, and the hair even detached itself in some places, and they were dull and inactive; while those of the other lot presented a fine smooth coat, and were perfectly lively and active, and, from their more favour-

able appearance, would unquestionably have brought a higher price in the market.—*Comptes Rendus*, 22d Nov. 1847.

57.—*Researches on Ox Bile.* By M. STRECKER.—It appears from the researches of M. Strecker, that ox bile is composed principally of salts of soda, potass and ammonia and of two azotised acids, one of which contains sulphur as a constituent.

The acid free from sulphur is the cholic acid, which was discovered by Gmelin, and which must not be confounded with the substance described by Demarcay under the same name. M. Strecker prepares it in the following manner. Fresh bile is precipitated with neutral acetate of lead, and the well-washed precipitate is boiled with strong alcohol. A current of sulphuretted hydrogen is then passed through the hot concentrated solution, in order to separate the lead. The fluid is filtered off, and the sulphuret of lead washed with water, which is allowed to run into the alcoholic fluid, which becomes turbid and milky, and in this state is left to itself. After the lapse of twelve hours, the entire liquid is converted into a mass of minute needle-formed crystals of pure cholic acid. Impure dry bile yields about $\frac{1}{4}$ of its weight of these crystals. 1000 parts of cold water dissolve 3·3 of cholic acid, and 1000 parts of boiling water 8·3. The aqueous solution deposits crystals on cooling, but the acid cannot be obtained in crystals from the alcoholic solution. Its constitution is expressed by the formula $C_{52}\ H_{43}\ NO_{12}$. When boiled with an excess of caustic baryta for some hours, it is entirely decomposed, and converted into the cholic acid of Demarcay, which Strecker proposes to distinguish by the name of chololic acid. The formula of this acid dried at 284° is, $C_{48}\ H_{40}\ O_{10}$, and the crystallised acid contains in addition 2 atoms of water.

By subtracting the formula of chololic acid from that of cholic, we arrive at a formula which, with the addition of two atoms of water corresponds to the composition of sugar of gelatine (glycocol).

Cholic Acid,.....$C_{52}\ H_{43}\ NO_{12}$
Chololic Acid.....$C_{48}\ H_{40}\ O_{10}$

$C_4\ H_3\ NO_2$
$H_2\ O_2$

Sugar of gelatine.... $C_4\ H_5\ NO_4$

And Strecker has separated from the fluid sugar of gelatine, and determined its identity by analysis. By boiling cholic acid with hydrochloric acid, the hydrochlorate of glycocol is produced; but, instead of chololic acid, we obtain the choloidic acid of Demarcay, and, by longer ebullition, the dyslysine of Berzelius. These two latter substances are represented by the subjoined formulæ:—

Choloidic acid,...$C_{48}\ H_{39}\ O_9$
Dyslysine,.....$C_{48}\ H_{39}\ O_8$

They consequently differ from one another, and from chololic acid, only by a certain amount of water.

It would appear, then, that the decomposition of cholic acid is precisely analogous to that of hippuric acid, which, according to the beautiful experiments of Dessaigne, splits up into glycocol and benzoic acid when treated with strong mineral acids. The sulphuretted acid of the bile of the ox undergoes a similar decomposition, and yields, under exactly the same circumstances, cholic acid, choloidic acid, and dyslysine; but, in place of glycocol, we obtain taurine, which contains all the sulphur of the bile.

Dr Bensch has determined the amount of sulphur contained in the bile of different animals. He has found the following quantities in 100 parts of the bile of the under-mentioned animals.

Calf,.....	5·62
Sheep,.....	6·46
Goat,.....	5·55
Bear,.....	6·38
Wolf,.....	5·03
Fox,.....	5·56
Fowl,.....	5·57
Dog,.....	6·21
Serpent (Schlieper),..	7.20
Ox,.....	3·5 to 4·0

All these numbers have been obtained from the analysis of the fresh bile, separated from the salts of the fatty acids, and decolorised by animal charcoal. The quantity of sulphur is referred to the *organic matter* alone of the bile. The difference in the numbers expressing the quantity of sulphur, leads to the conclusion that the bile is a variable mixture of the two acids of which it is composed.—*Comptes Rendus*, 13th December 1847.

[This is a most important contribution to the chemistry of the bile, and one to which we shall in all probability have occasion to return on the publication of the paper in full. We may, however, observe, that some of Strecker's results agree with those previously obtained by Mulder, although the latter chemist has given different formula for his substances. Thus, for instance, he gives for dyslysine, $C_{39}\ H_{32}\ O_8 + \frac{1}{2}\ HO$, which gives almost exactly the same per cent. results as Strecker's; and he has, moreover, ascertained the existence of several other sub-

stances allied to dyslysine, and differing from it only by a small quantity of water. We shall endeavour, when we return to Strecker's experiments, to give our readers an idea of those of Mulder, and a short general view of the constitution of the bile.]

II.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

58—*On Inflammation of the Vena Portæ—Pylephlebitis.* By Dr J. Waller, Prague. This form of disease has only lately been brought to light by the researches of pathological anatomists. In several French and English writings of the years 1823, 1829, and 1839, observations relating to it are to be found; but they present so many omissions, in an anatomical point of view, as to leave the diagnosis unassisted. In Germany, Balling was the first (1839) to find inflammation of the vena portæ after death; after him, Schonlein observed several cases; Rokitansky has taught us its anatomy more correctly. The diagnosis is, however, still uncertain. The author relates five cases, from which the following observations are deduced:—

Anatomical Characters.—1st, The alteration of the coats of the vena portæ was in every case but slight, and bore no relation to that of its contents. From the circumstance that, in one case, the coats of the mesenteric vein were shrivelled, of a whitish-grey colour, and, in isolated spots, adherent, and almost cartilaginous, it would appear probable that the inflammatory process had commenced here. In every case, the cavity of the vein was dilated by inflammatory products, its trunk rigid, and its diseased condition externally apparent. 2d, Alterations in the portal blood; *a*, various degrees of coagulation were present in four cases; *b*, formation of pus was only observed in three cases; *c*, acute deposit of medullary sarcoma occurred in two cases. As to the extent to which the portal system was involved, in the first case only the splenic vein escaped. In the second and fifth cases, the trunk and branches of the vena portæ were affected—not, however, either the mesenteric or splenic veins. In the third case, the splenic vein, and a branch of the inferior mesenteric, to its finest subdivisions; and, in the fourth case, the branches of the entire portal system, were affected. The complete absence of anatomical alterations in the coats of the vessels, and the striking evidence of inflammation in their contents, show that there is here no primary phlebitis, but one of which coagulation of the blood is the proximate cause, whether that be spontaneous, or occasioned by the absorption of pus or its elements. The separation of the fibrine by coagulation is sometimes perfect, and at others imperfect, and the longer the duration of the disease, the more complete is the transformation of the entire coagulated lymph into pus. Secondary inflammation of the coats of the superior mesenteric vein occurred in the first case, as a sequel of the purulent phlebitis; in the other cases, death occurred too early for the development of such consequences. The time required for inflammation of the coats of a vein, subsequent to coagulation of its contents, varies. In the first case, after forty-seven days, the only part of the portal system inflamed, was a small portion of the superior mesenteric vein; while in the fourth case, in which the disease had only lasted five days, this had already commenced. The rapidity and intensity of the affection of the blood, seems, therefore, to exert a decided influence.

Symptomatology.—Physical examination of the vena portæ and its branches, is, on account of its anatomical position, impossible; we must, therefore, have recourse to the symptoms observed.

The Objective Local Symptoms.—Of these, the first is the abdominal distension, either meteoristic, or from the accumulation of serum. Neither appears of diagnostic value in pylephlebitis, as in no case is there a direct connexion between them and the inflammation of the vein. The meteorismus depends on the pyæmia and the coexisting peritonitis; the ascites, on a carcinomatous, or granular state, of the liver. This organ was enlarged in all the five cases; but this symptom is uncertain, because common to many other diseases. Icterus was observed in four cases. It was caused in the first and second cases by numerous abscesses in the liver, containing pus and bile mixed; in the fourth and fifth, by granular and carcinomatous states of the liver; in the non-icteric case, the colour of the skin was that usual in the carcinomatous dyscrasia. Although pylephlebitis, like every other pyæmia, may produce an icteric coloration of the skin, in none of the five cases was it dependent on the pyæmia alone; and it is, therefore, undeserving of being reckoned pathognomonic.

Enlargement of the spleen has been cited by Schönlein as a diagnostic mark. It was present in four cases. In the three first cases, it was caused by mechanical hyperæmia; in the second case, it was accompanied by partial plastic exudation; in the third, by simultaneous copious formation of pus in the branches of the splenic vein; aud, in the fourth case, it was dependent on the granular and carcinomatous state of the liver. In the fifth case, the spleen was indeed smaller; but its texture was hypertrophied. Enlargement of the spleen can evidently be produced by inflammation of the portal vein, and is not unimportant, in conjunction with other symptoms, where the state of the chest and abdominal organs permits a correct examination of its state by percussion. Nausea and vomiting, even of blood, have been given as symptoms by Balling and Schönlein. Our author observed in three of his cases only a trifling vomiting of a whitish or yellowish fluid; in one case, caused by encephalitis; in the second, by chronic catarrh of the stomach, aided by the presence of the carcinomatous liver; and, in the third, the section revealed no sufficient cause. From these cases, vomiting cannot be considered a symptom of pylephlebitis. The alvine dejections were seldom normal. In the first case, they were costive; in the second, sero-mucous, occasionally dark green. Diarrhœa harassed the patient. In the third case, there was constipation; in the fourth case, a yellowish-green diarrhœa, with occasional streaks of blood; in the fifth case, frequent muco-serous, and blackish, pulpy evacuations. Different conditions of the stools, as well as hematemesis, may accompany inflammation of the vena portæ, yet have no immediate connexion with it, as they are brought about by the occurrence of mechanical hyperæmia, or other complication. The mechanical distension of the epigastric and hypogastric veins, reckoned by Schönlein as a symptom of this phlebitis, was not observed by our author.

Subjective Local Symptoms.—Pain was entirely absent in the fourth case. In the first case only it was occasional, and increased by pressure. In the second, the entire epigastrium was sensitive, and the inguinal and iliac regions violently painful. In the third and fifth cases, the pain was likewise most violent; but in each of them complications existed capable of producing pain. It is, therefore, uncertain whether inflammation of the vena portæ be accompanied by pain. Ascites was looked upon by Cruveilhier as a symptom of this disease. Neither our author, nor others, have confirmed this observation. Impermeability of the vena portæ, however produced, is nevertheless certainly followed by ascites. Œdema of the inferior extremities cannot be looked on as dependent on the inflammation of the portal vein, inasmuch as the veins of the extremities do not empty themselves into it, but into the vena cava inferior. Occasional pulsation in the right jugular vein, in the abdomen, and various parts of the body, fainting fits, dry cough, &c., included in the list of symptoms of this disease by Balling, are not recognised as such by our author, inasmuch as he never observed them, and cannot discover their relation to the disease. As to the state of the circulatory system, Baczinsky thinks he has observed, in the first stage, the symptoms of inflammatory fever, and, in the second, a sinking in both the nervous and circulatory systems. Schönlein prides himself on having, from the occurrence of a rigor, recognised the transition of the inflammation from the peritoneum to the vena portæ. The possibility of inflammation of the vena portæ being accompanied by inflammatory fever, cannot be denied. In the cases observed by our author, only that form was observed commonly called adynamic, or nervous fever, and in them is only indicative of the presence of pyæmia. In the second and third cases, the occurrence of inflammation of the portal vein appears indubitably to have been ushered in by a rigor, and, in the fourth and fifth cases, a rigor was also the first symptom of the affection of the portal system. The pulse was constantly accelerated—from 92 to 100. The skin, in every case, hot at the commencement. In the first case, dry, and, in all the other cases, moist from perspiration. In the second, it was repeatedly covered with miliaria. In no case were petechiæ observed. The urine was constantly acid, and in none of the cases contained pus corpuscles. The pyæmia gave evidence of its deleterious action on the reproductive system, by the rapid disappearance of the fat and muscular substance: it caused only trifling disturbances of the nervous system. The cerebral symptoms in the third case are to be ascribed to the encephalitis. In two cases, a peculiar melancholy expression of deep suffering was present. The delirium, stupidity, distortion of the features, nuplesmus, or coma, described by several observers as symptoms of portal inflammation, ought, according to our author, more properly to be ascribed to the pyæmia. The symptoms most worthy of regard are, therefore, enlargement of the liver, icterus,

pyæmia, and enlargement of the spleen. Yet, even from these, the diagnosis cannot be decided.

Duration, Course, and Termination.—The shortest duration of these cases was three days; the longest, forty-seven. It has consequently been considered necessary to distinguish between an acute and a chronic form of this disease; but this seems quite unnecessary. The acute form has likewise been divided into an inflammatory and an adynamic stage. The pyæmia has been, in all hitherto observed cases, the cause of the adynamic symptoms. Recovery from pylephlebitis, though it cannot be denied, has not hitherto been observed. The most frequent termination seems to be suppuration—though it would be difficult, indeed, to diagnose at the sick-bed. As consequence of purulent pylephlebitis, abscesses are formed in the liver. Adhesion and obliteration of the vena portæ, happen either in the trunk, or more frequently in the larger or smaller branches. The appearances accompanying this termination are all referable to mechanical hyperæmia, and consist in enlargement of the spleen, hyperæmia of the gastro-intestinal mucous membrane, and of the peritoneum, turgescence of the hemorrhoidal veins, ascites, &c. Death has been the final termination of all the cases hitherto observed: in the author's cases, partly brought about by pyæmia, partly by carcinomatous dyscrasia, or carcinomatous destruction of the liver and stomach. The complications may also prove fatal. Some of these were connected with the pyæmia,—partly as cause, partly as effect; others with the carcinoma, and the dyscrasia producing it.

Etiology.—Our author regards as primary pylephlebitis, the case observed by Balling, in which, neither in life nor after death, any cause of the disease could be discovered, and in which the disease of the coats of the vessels seemed to be older and more advanced than that of the blood. The causes of primary pylephlebitis are traumatic inflammations and exposure to cold. Almost all hitherto observed have been secondary, in which the coagulation of the blood has been the first and most important occurrence, followed by inflammation of the coats of the veins; that this occurred in our author's five cases he shows in detail. According to foreign observations, inflammation of the vena portæ is frequently a secondary disease, arising in the course of inflammation of the substance of the liver, or of other veins, &c. As to a peculiar disposition to this disease, nothing decided can be said; it may often occur in new-born children as an extension of the inflammation of the umbilical vein, which is not uncommon at this age. The influence of age or sex is yet undecided.

The prognosis must in general be unfavourable. While the diagnosis remains so uncertain, nothing can be said as to the therapeutics of this disease.—*Wien. Zeit.*, Sept. and Oct. 1846.

59.—*On the Chemical Composition of the Blood in Scurvy.* By Becquerel and Rodier. Also by Andral.—Becquerel and Rodier draw the following conclusions from the analysis of the blood in five well-marked cases of scurvy:—

1. The blood presented none of those characters of dissolution so much insisted on by the older writers. It was not unusually alkaline, and contained no remarkable proportion of salts. 2. It was poor in corpuscles (127 in 1000 parts) and in albumen, and therefore relatively abounding in water. This condition was probably owing in these cases more to the deficiency of appetite, than to the peculiar scorbutic condition; but it is remarkable that, notwithstanding this anemic state of the blood, there was no trace of murmur in the vessels. 3. The fibrin, instead of being, as supposed by Magendie, Andral, and Gavarret, diminished and altered in quality, was in normal quantity, or increased (4·1 in 1000 parts), and of normal characters. 4. The only appreciable positive alteration of the blood is a diminution of the specific gravity, both of the defibrinized blood (1057), and of the serum (1027); this diminution is nevertheless not proportionate to that of the solid constituents. The authors have not been able to come to any conclusion as to the cause of this; but suggest, that it may be owing to some peculiar combination, hitherto overlooked, of the chemical elements.

Andral examined the blood in a case of scurvy, in which petechiæ and ecchymoses were present in great abundance, and there was bleeding from the gums and nostrils. Venesection was practised on account of a bronchial inflammation, with distinct fever, and gave manifest relief. The blood had a small, thick, tenacious clot, which was covered with a perfect buffy coat, and swam in a large quantity of serum. In this respect it had much of the appearance of chlorotic blood. 1000 parts gave fibrin, 4·420; corpuscles, 44·400; solid constituents of serum, 76·554; water, 874·626. It resembled, therefore, chlorotic blood in the relatively small proportion of the corpuscles. The fibrin was above the nor-

mal proportion. Andral, therefore, holds that the quantity of fibrin in the blood bears no necessary relation to the development of scurvy; but that it is increased or diminished in that disease according to accidental circumstances. The decrease of fibrin is therefore not the cause of the extravasation of blood, as many have supposed; neither is there any ground for the supposition of a decomposed state of the blood.—*Gazette Médicale*, Nos. 27 and 28. 1847.

60.—*On the Variations in the amount of Fatty Matter in Diseased Lungs.* By M. NATALIS GUILLOT.—During fœtal life the fatty matter continued in the lungs amounts to 10·18 per cent.; but, after respiration is established, the proportion never rises in the normal state above 6 per cent. When, however, a portion of lung is rendered impervious to air by disease, the fat accumulates, and becomes in relation to the whole weight of the lungs 15·40, or even 50 per cent., according to the amount of pulmonary tissue involved. In pneumonia and phthisis the relative amount of fat in the lungs becomes as great as in the liver, which always contains a large proportion. A similar accumulation of fat takes place in animals after section of the vagi nerves, as also in asphyxia and during hybernation. M. Guillot considers the accumulation of this substance in the lungs to be caused by deficient oxygenation of the blood, which he believes to contain some of the fatty matter of the tissues destined to be consumed in the lungs.—*Gazette Médicale de Paris.* No. 29. 1847.

61.—*Examination of the Nasal Secretion in Glanders in the Horse.* By Professor LANDERER of Athens.—In the earlier stages of the disease, the fluid which flows from the nostrils is without smell, or any other conspicuous property; but, as the disease advances, it becomes green or reddish-coloured, of a slimy consistence, and nauseous odour. In the former stage, it is slightly acid to test paper, coagulates by boiling, with a distinct odour of acetic acid, and is precipitated in white flocks by alcohol and ether. In the later stages it becomes alkaline, evolves ammonia when heated with slaked lime, and blackens silver instruments, owing to the presence of sulphuretted hydrogen. Accurate examination proved the fluid in the later stage to contain muriate and hydro-sulphuret of ammonia, salts of sulphuric acid, watery extractive possessing a very disagreeable odour, a rancid fatty matter, containing sulphur, albumen, phosphate, and carbonate of lime.—*Heller's Archiv.*, 1847, Part III.

62.—*On the Urine in Typhoid Fever.* By M. MARTIN-SOLON.—M. Martin-Solon recently (Nov. 1847) read at the Académie an interesting paper upon the condition of the urine in typhoid fever, the principal points of which are thus summed up: 1. The urine in typhoid fever is less abundant, higher coloured, and generally more dense, than in health. 2. It is as acid as in the normal state, and sometimes more so. 3. It is rarely alkaline, but, in consequence of its large proportion of urea, it readily passes into the condition of alkalescence. So abundant is the urea, that sometimes a nitrate may be at once formed by the addition of nitric acid without any preliminary evaporation,—a density of from 1·030 to 1·036 indicating this condition. 4. Generally transparent, the urine is sometimes clouded with mucus (the *enaorema* of the ancients), or by an excess of too sparingly soluble salts, which give it a "*jumenteux*" appearance, and which give rise to sediments, formed especially of uric acid and the urates with colouring matter. 5. That critical signs deduced from these appearances are not to be depended upon. 6. That in transparent urine, nitric acid sometimes gives rise to no reaction, but in other cases produces a *cloudiness* immediately. 7. The same thing is observed in "jumentous" urine, when rendered clear by filtering. 8. That this cloud, of a peculiar tomentous aspect, formed by a bi-urate of ammonia, but the nature of which is perhaps not yet entirely known, is seen especially at the period of the resolution of typhoid fever, and acute diseases, which it precedes and announces; and according to our clinical observations (in fifty-four cases) possesses a *critical* value which deserves attention. 9. That the bile undergoes a notable alteration during typhoid fever, which is doubtless the cause of the appearance of *biliverdine* in the urine. 10. That the urine sometimes becomes temporarily albuminous during the course of acute diseases; but that the congestion of various organs, especially partaken of by the kidneys, and the especial tenuity of the blood in typhoid fever, render such temporary albuminuria far more common in this than in other affections. 11. Temporary albuminuria is especially seen in severe cases of typhoid, and generally gives rise to the most unfavourable prognosis. 12. Temporary albuminuria may sometimes become continuous, and the kidneys then exhibit the usual pathological characteristics of con-

firmed albuminuria. 13. The inspection of the urine throws light upon the progress of a case of typhoid fever, and may serve as a means for the direction of its treatment.—*Bulletin de l'Académie*, tom. xiii, p. 398.

III.—PRACTICE OF MEDICINE.

63.—*Hebra's System of Skin Diseases.* By Dr Fürstenberg of Berlin.—*Continued.*—The chronic exudative processes are also subdivided according to the nature of the exudation:—

a The fibro-albuminous are firm, organizable exudations, and comprise—

1. *Pityriasis rubra* seldom occurs alone, and then but for a short time; it is generally but a stage in the development or retrogression of other diseases, as *Eczema*. Its diagnostic characters are slight swelling, with diffuse redness of the skin; the scales separated are small, resembling bran. Treatment, cold fomentations.

2. *Psoriasis* forms numerous thin white scales on a red ground; is not itchy, and has also, according to Hebra, the characteristic peculiarity, that if the diseased part be gently scratched, a drop of blood speedily issues; in *lichen*, this last symptom is never present; it is also accompanied by great itching, forms few scales, but rather broad stripes. We know nothing of its etiology; it is frequent among drunkards; has no ill effect on the general health; but is difficult to heal, and readily relapses. In private practice, particularly when the patients are at work during the day, Hebra recommends the following practice:—A bath at night, friction over the diseased part with an ointment of *Precipit. album*, *Protoiod. hydrarg.*, or *Deutoiod. hydrarg*, the last most frequently, ℈ j — ʒ ss to the ounce of lard, warm poultices during the night, inunction again next morning, and so on daily. In a few cases, he prescribes *Sublimat. corros.*, or *Tinctur. cantharid.*, 6 to 30 drops daily, and, in obstinate cases, the *Sol. Arsenic Fowleri*; first 6, then 12, and, later, 30 drops daily. This is the largest dose given; and from this he descends again to the lowest. Opiates are useful when the arsenic produces unpleasant symptoms, as cardialgia, emesis, or eructations; but when symptoms of gastritis, or *arsenical rheumatism* appear, the remedy must be forthwith discontinued. All other internal remedies put to the test have failed. In hospital, the patient is made to rub himself with pitch, or, by preference, with soft soap (grüne seife), and lie in bed, or warm fomentations and warm or vapour baths are applied; or the patient is made to go through the cold water cure as rigorously as with Priesnitz himself. Internally, arsenic is at once given. The various kinds of *Psoriasis*, as the *punctata*, *conferta*, &c. &c., are but various stages of development of one and the same disease.

3. *Lichen ruber*, luckily as rare as it is obstinate; not to be confounded with the *Lichen albus Willani*, appears as a red infiltrated portion of skin, the thickness of which is not, however, doubled; it is covered with thin delicate scales; there is little itchiness. The great swelling distinguishes it from *Pityriasis rubra*, the absence of moisture from *Eczema*; when it extends over the whole body it forms the *Lichen diffusus*. At its commencement only small lumps are seen, always in the follicles, which desquamate at their apices. The treatment has been hitherto almost fruitless; the most useful remedies have been Fowler's solution and Priessnitz's cure.

4. *Acne disseminata* consists in an inflammation of one or more follicles, caused by accumulated sebum; consequently, it is always preceded by *comedones*, which, subsequent to exudation, become *papules* and *pustules*, and afterwards either suppurate or become hard and callous. If only comedones are present, the disease has been called *Acne punctata*; if there be pustules combined with destruction of the follicles and formation of a cicatrix, *Acne pustulosa*; where all three forms are present, *Acne disseminata*. In *Acne syphilitica* there is no previous formation of comedones.

Though far from denying that this disease may have a dyscrasic origin, yet Hebra has come to the conclusion that general remedies are useless. The formation of comedones is prevented by washing and bathing; where they are already formed, dry cupping is used. If the *Acne* be completely formed, caustic potass, one part to two of water, is painted over the diseased part after it has been well washed and rubbed with soap; from this an *Impetigo achor* generally arises, which dies of itself, fomentations being avoided, and the disease thereby cured.

5. *Sycosis* and *Acne mentagra*, at first are seen single, swollen, and red hair

follicles, forming papules of various sizes, each perforated by a hair. The exudation forming the papules is either thrown off in scales, becoming, however, always renewed from beneath, or it suppurates, beginning in the centre; if the disease be more acute, a single red infiltrated portion of skin is seen covered by a crust of pus or scales; or the entire portion may be in the same stage. It is distingushed from all other skin diseases by being confined to the seat of the beard. It heals of itself by suppuration, but requires a long time. Medical interference must therefore be directed to this end. Fomentations are first applied to remove the crusts, and then concentrated nitric acid is applied, by a piece of lint rolled, quite superficially; cold fomentations are then applied over the yellow crusts so formed. The acid is applied only once in seven or eight days; ten to twelve applications alone are necessary—so that the author has frequently, in Hebra's clinic and private practice, seen this obstinate disease completely cured in three months.

6. *Lupus.* Its different species are merely different stages of development. It heals in from five to twenty years, either by exfoliation or suppuration. During the febrile stage of acute diseases, particularly typhus, the eruption disappears. According to Hebra it recurs with convalescence; but our author saw two cases under Dr Gibert, in the Hôpital St Louis, in which lupus disappeared on the occurrence of typhus, and, eight weeks after the cessation of the fever, it had not reappeared. Only in scrofulous or syphilitic lupus is there any hope of benefit from internal remedies; the idiopathic lupus, forming the greater number of cases, can only be treated by cauterization. Hebra paints the surface with concentrated nitric acid till it becomes white, fomenting with cold water after half an hour; if ulceration exists he employs the Nitras argenti. If the actual cautery be employed it is as well to burn deeply at once, as the patient will seldom submit a second time; he also employs Plenck's paste with patients who are shy of pain. It is composed of *sublimat.: alum. crud.: spir. vin.: camphor.: ceruss.: acet. vin. āā partes. æquales*, and is very powerful, but very insidious, producing no pain for some little time after application, but then pain occurs, lasting continuously for eight and ten hours, even when cold fomentations are immediately and assiduously applied. Patients who cannot bear cauterization are treated with "das cosmische pulver."

b. Sero-albuminous exudations,—

1. *Prurigo* originally consists of effusion of serum into the deep lying follicles; these are at first uniform in colour with the skin, subsequently becoming red. If the papules be then scratched, the blood and serum form a black brown crust; if the scratching be continued, ulceration follows. If the papules be not scratched, the serum becomes metamorphosed to pus, and pustules are formed. In old affections the lymphatic glands become swollen; the papillary bodies are likewise hypertrophied, forming deep furrows in the skin. It is often complicated by dropsy of some cavity, or of the skin, and is always incurable; for although easily removed by any remedy causing the epidermis to be thrown off, it is impossible to prevent relapses. Hebra employs the following ointment:—

R.—Kali caustic. saturat. ʒ vj (spec. grav. 1·333)
Axung. ʒ xij.
M. ft. ungt.

Four ounces of this are rubbed into the patient during the first three days, and two ounces during the next three, and during the whole time he must sleep between blankets; in a few days the skin is quite clean. Sublimate baths have a similar effect. *P. mitis* has small papules, the *formicans* large ones. *P. sine papulis* is an affection of the nerves of the skin, and *P. pedicularis* has no place here.

2. *Scabies sarcoptosa.*—The presence of acari is the sole diagnostic symptom of value; where they are not present, the case is not scabies; their dwellings resemble slight rents through the epidermis, and by a little attention are easily discovered. The efflorescence is generally vesicular, which may remain entire, or, being scratched, may form red spots from injury of the epidermis, on which crusts may form; or pustules are formed, which, as well as the former, may, by further metamorphosis, form the so-called scabious ulcers.

All these forms arise from the presence of acari, scratching, and pressure. As certain individuals are not liable to be attacked by other parasitic insects, so transplantation of acari does not always produce scabies. In the hospital he employs what is called the English cure (6 ounces sulphur and tar, 1 pound soap and axunge, 4 ounces white chalk; this is sufficient for twenty-five patients.) In private practice, the patients are bathed between 5 and 6 P.M., and then rubbed with an ointment composed of equal parts of caustic ley, linseed oil and soap, particularly on the hands and arms, on which the acari are almost always present. After inunction, gloves are put on to prevent

further infection by scratching during the night; when several of a family are affected, all must be rubbed at the same time. Four or five such innuctions are sufficient for a complete cure; if a papular efflorescence remains, it must be rubbed with a solution of one drachm caustic potass in one pound water; the clothing must also be carefully disinfected.

3. *Eczema.*—Vesicles which are regarded as being constantly present, are not present in all the varieties; in *E. simplex* they are present, but in *E. rubrum* so much serosity is secreted that the epidermis falls off. Hebra gives, therefore, as diagnostic symptoms, thickening of the cutis, moist state of the skin, base of epidermis, and finally desquamation; excoriations are produced by the patient's scratching. The vesicles may leave a scurf behind, more or less adherent to the subjoined parts, or the contained fluid may become purulent, forming pustules, or both may be present, the one leaving dampness and scales, the other crusts. The crusts vary in colour, are at first yellow, becoming darker by age, and brown when mixed with blood coming from the scratched portions.

E. impetiginosum is a variety with large crusts. The strength and elevation of the injurious influences, and the disposition of the individual, give character to the disease; in one the *impetiginosum* occurs at once, which may, by fomentations, be changed to a *rubrum*, and all the three varieties may be present at once. *Tinea mucosa, Tinea ciliorum* are only eczema of the head and eyelids; *Porrigo larvalis* is *Ecz. impetig.* of the face, &c. &c. Any irritation of the skin from rubbing, heat, cold, or chemical preparations, can produce eczema, and, although frequent in scrofulous people, yet in them its characters are nowise different. Hebra, therefore, disbelieves in any connexion between scrofula and eczema. External treatment suffices; in slight cases, cold douches applied for five to twenty minutes over the diseased portion, are sufficient. In more severe cases, Hebra prefers caustic potass, one pint to two of water, rubbed in, after removal of the crusts by fomentation; a soap-like mass is thereby formed on the diseased portion, drops trickle out about half an hour after, which then form crusts. Cold fomentations are applied, and the caustic reapplied as soon as new efflorescence is seen. Hebra has observed that, in general, as many cauterizations are required as the disease has lasted months. In the worst cases, the cure is never longer than three or four months. An ointment of ox. zinci ʒj in axung. ʒj is recommended as palliative, particularly for the itchiness. Internal remedies are useless.

4. *Pompholix seu Pemphigus chronicus.*—Vesicles, arising with or without fever, containing a clear watery fluid, which burst, and are constantly renewed, so that the disease may last for months or years. *Pemphigus acutus* Hebra has never seen; he has never found the fluid to contain uric acid, it is always either weakly alkaline or neutral. As we cannot hinder the eruption, the treatment must chiefly consist in supporting the strength of the patient, which is generally much depressed. Of five patients treated by Hebra, three died and two recovered.

5. *Rupia* is not very common, and generally of syphilitic origin. Commences by the formation of vesicles which are never full; the fluid speedily dries, and fresh vesicles constantly recur, as the centre portion is the oldest. We find the characteristic symptom of this disease to be vesicles surrounding a depressed crust, yellow at the edges, dark brown or black in the centre. Hornlike crusts are very rare. Hebra has never seen *Rupia escharotica.* The treatment must in general be anti-syphilitic.—*To be continued.*

64.—*On Pericarditis Scorbutica, and its Treatment by means of Paracentesis.* By Dr A. Kyber.—The disease here described is found on the extreme northern coasts of Europe, where scurvy reigns endemically from spring to autumn; and affects almost exclusively the class of sailors, who are of course peculiarly exposed to all the causes of the scorbutic diathesis. This form of pericarditis appears to have been described by Cælius Aurelianus under the name of *morbus cardiacus;* but in more modern times has fallen into neglect, partly from the remoteness of the regions in which it prevails, and partly on account of the obscurity of the symptoms, and the deficiency of pathological observations. Dr Kyber considers it as a very different disease, in its course and phenomena, from ordinary pericarditis. He thinks that its causes are the same as the scurvy, to which it is so closely allied; and remarks that the extent of its epidemic prevalence in a given year is always proportionate to the violence of scurvy in the same year. It seldom appears before February, attains its height about April, declines in summer, and disappears during autumn. It affects chiefly men from twenty-five to forty-two years of age; it has not been observed in women. A fourth of those affected are Russians, and three-fourths are Lettons (Lithuanians, &c.), and Esthonians, men mostly of a relaxed

habit, and prone to hypochondriac and nostalgic affections. The external signs of scurvy are not always visible. In fatal cases the pericardium is found enormously distended, often measuring a foot in length, and containing three to eight, or even ten pounds of a dark-red, or blackish opaque fluid, composed of serum and fibrin, with blood corpuscles angular, and otherwise altered in form. The inner surface of the pericardium is covered with a coat of lymph, which is easily torn, reticulated on the free surface, of the colour of cinnamon; it can often be removed in layers, of which the palest and firmest are those attached directly to the membrane. The membrane itself is either injected, or stained with dark-coloured sugillations. On the part covering the heart, the lymph is often irregularly disposed in shreds, having a ragged or honeycomb appearance, and composed of bright red or yellow granules. The heart is diminished in size, and its substance is pale, flaccid, and easily torn. In cases where the fluid has been absorbed, adhesions are found between the layers of the pericardium. A similar exudation to that above described, is frequently found in the pleura or peritoneum. The left lung is frequently much compressed by the distended pericardium, the right gorged with blood, or even inflamed.

The author describes the symptoms of this affection as occurring under two forms, acute and chronic; of which the former is commonly primary, the latter supervening secondarily on a catarrhal, or rheumatic affection. The acute form begins with a sensation of coldness and prostration, oppression alternating with pain in the chest and epigastrium, rapid painless breathing, and decubitus on the left side; to these follows a discontented, gloomy condition, or complete apathy; with a pulse small, intermitting, or, when the effused fluid reaches two or three pounds, inappreciable. When the quantity of fluid is very large, the extremities are cold, the pupils dilated, the jugular veins distended, the expression exceedingly anxious; consciousness remains unaffected. The percussion may be dull on the left front up to the clavicle; the heart's sounds distant or inaudible, if the fluid be large in amount; if this be small, there may be friction sound. The left side of the thorax is distended, and does not move freely; the lung on this side does not act; the right side, on the contrary, has puerile respiration. The epigastrium is protruded, and sensitive on pressure. In the acute form these symptoms may be developed in twelve hours; in the chronic the progress is longer, the danger to life less immediate; but the retrograde process of the disease, in case of amendment, is also much slower and less satisfactory in its results.

In the treatment of this formidable affection, most of the remedies for ordinary pericarditis are either inapplicable from the cachectic constitution of the patients, or, if applied, fail to accomplish any good purpose. The apparent certainty of a fatal issue in such cases, induced the author to afford a chance of prolonged existence by paracentesis of the pericardium. This operation, however, he has not yet attempted, except in cases where death seemed impending, and where the fatal issue could only be postponed by a bold measure of immediate relief.

The operation performed by the author consists in the insertion of Schuh's trocar between the fourth and fifth ribs of the left side, close to the sternum, and passing it a little obliquely outwards, till the point is felt to enter the pericardium. The trocar is then withdrawn, and the fluid allowed to flow through the canula, which is apt to become blocked up by lymph, and in this case must be kept clear by a stilet or probe. By this method, both the pleura and the internal mammary artery are avoided. The operation is painless, except where it is necessary to remove, by the adaptation of a syringe, either fluid or air which has entered into the cavity. The immediate effects of it are, return of the pulse, removal of the anxiety and dyspnœa, and renewed animal heat, with comfort and cheerfulness of mind; at the same time, the friction sounds return, and the heart's sounds also become again appreciable. In the greater number of cases, life is merely protracted, as the fluid is again effused in a few weeks in as large a quantity as before, and becomes fatal. Nevertheless, in four cases the author has succeeded in accomplishing a radical cure. In three of these he administered, after the operation, the sulphate of quinine, which he recommends to be used in doses of six to fifteen grains every two or three hours, with the object of affecting favourably the capillary system, and preventing the renewed effusion of serum. The dissections of patients who, after an attack of this disease, have died of some other affection, show, that when a radical cure takes place, it is through adhesion of the pericardial surfaces, which occurrence the author believes, however, to be much rarer in this than in other forms of pericarditis. He thinks that stimulating injections might

possibly conduce to this favourable result, especially as it has appeared to him that the entrance of a certain quantity of air is productive of no bad result, but even seems to stimulate the membrane to a healing action.

In the four cases which were cured by paracentesis, the operation was only once performed; it was repeated (after the lapse of seventeen days) in one case only, and in this the result was unfavourable. He seems to think, that if it were performed at an earlier period, it might be more frequently and permanently successful; but he has not thought himself justified in attempting this, having only operated in cases altogether desperate.—*Œsterreichische Med. Wochenschrift*, No. 35, 1847; from the *Med. Zeitung Russlands*, No. 20-25, 1847.

[Neither the symptoms nor the *post-mortem* appearances in the disease above described, appear to differ remarkably from those of ordinary acute and chronic pericarditis, except in so far as they are modified by the coincidence with the scorbutic diathesis. The endemic occurrence of such a disease is a curious and important fact; but we cannot regard it as being *sui generis* and peculiar to the shores of the Baltic, as Dr Kyber seems to consider it. On the contrary, we believe that the disease may occur wherever the scorbutic or hemorrhagic constitution concurs with the exciting causes of serous inflammations; and we are confirmed in this view by having seen one case in the Royal Infirmary during the prevalence of the epidemic scurvy of last spring, where the appearances on dissection corresponded most accurately with the description given above. Paracentesis of the pericardium, for the removal of effused fluid, is not a new operation, although it has been rarely performed; and, according to Chelius, has been successful in only two instances; in the practice of Schuh (*Oester. Jahrbücher*, vol. xxxvi.) and of Karawajew (*Preuss. Vereinzeitung*, 1840, No. 52), who performed it twice in cases similar to the present. It was first proposed by Senac, and has engaged the attention of various surgical writers, but with little practical result. It has been performed by Skoda in the hospital at Vienna, but, we believe, without more than a temporary good result. Under these circumstances, Dr Kyber's cases are certainly worthy the attention of the profession. The instrument known in Germany as Schuh's trocar has a canula, which is furnished with a stopcock, and to the end of which is fitted an additional tube. This is bent at a right angle, and supports at its further extremity a small trough, or cup, into which the liquid flows, and, by its accumulation, prevents the sudden reflux of air into the serous cavity. A contrivance which is used by M. Trousseau of Paris, seems to be very effectual for this purpose, and has the merit of great simplicity. On the withdrawal of the trocar from the ordinary canula, he adapts to its free end a piece of oiled silk, or goldbeater's skin, so disposed, that while the fluid escapes readily between the lower lip of the canula and the silk which overhangs it, the least reflux movement forces this down upon the opening, in the manner of a valve. It appears to us, that in the event of an operation being undertaken, the propriety of drawing off the whole of the fluid at once, as recommended by the author, is very doubtful.]

65.—*Pleuritis and Empyema in Children.* By F. Battersby, M.B., Dublin.—Dr B. proves, by reference to various authors and hospital reports, the incorrectness of the statement made by Maunsell and Evanson, that "there does not seem to be much tendency to these diseases in the young subject." These writers still adhere to the antiquated notion handed down from Cœlius Aurelianus, Aretæus, and Morgagni, "*passionem pleuriticam difficulter pueros incurrere.*" Dr B. agrees with most authors, that pleuritis, uncomplicated with pneumonia, is rare until after three years of age, when it is as frequently met with as in adults; he further agrees with Rilliet, Barthez, and Baron, that single pleurisy is more frequent than double, but he disputes the statement of these authors, that it is more frequent in the right than in the left side of the chest.

Our author then proceeds to relate his cases. The first was that of a boy aged two and a half years, whose illness was of three weeks' duration. There was then increased heat of skin and fever, hurried and oppressed breathing, with a short dry cough. The left side was visibly and greatly enlarged, and remained perfectly unmoved during the respiratory effort, and the entire of this side, which was an inch and a half in circumference larger than the right, presented a remarkable roundness and smoothness, owing to the wide separation and protrusion of the intercostal spaces. Every part of this side yielded on percussion a dull dead sound, and the stethoscope could elicit nothing but what seemed to be a distant vesicular murmur close to the spine. On the right side of the chest the resonance, respiratory movements, and sounds, were

all increased in intensity. The heart was displaced so as to present behind the sternum. In a fortnight a tumour presented between the fifth and sixth ribs, situated somewhat above and behind the usual position of the apex of the heart, in circumference about the size of half-a-crown, slightly inflamed, very sensitive to the touch, and with its centre prominent. It was quite soft even at its base, which was not well defined; fluctuation was not distinctly perceptible, but the skin over it became tense when the patient cried. The enlargement of the chest was now even more marked than before, and the heart was so far dislocated as to be below and to the right of the right mamma. The child seemed scarcely to suffer; in a few days the integuments over the tumour gave way, and a quantity of thin brownish coloured fluid escaped. At the end of a fortnight he was much wasted by sweating, diarrhœa, &c., but the discharge was not great. The heart was now beating at the left side of the right mamma; the stethoscope indicated no other change. The left side of the chest seemed to be contracting. From this period the case appeared to proceed favourably, the subclavicular and upper inter-scapular spaces becoming less dull on percussion; in the former a loud bronchial respiration, and in the latter a hoarse respiratory sound, became audible. The heart retrograded to behind the sternum; the left side of the chest was now smaller by measurement than the right, and visibly flattened beneath the clavicle. The diarrhœa ceased, there was little dyspnœa; the discharge from the side was thick healthy pus; the child had gained strength, and was able to run about. He was now lost sight of, but Dr B. heard that he was alive four months later.

In the second case the empyema was disappearing when the author saw the child. The affected side was much contracted and flattened, percussion was dull over its entire surface, and large mucous rales alone were audible. The treatment adopted was the administration of iodine internally and externally. In about a month the lung began to return to its normal condition, an extensive soft crepitus over the entire side was first heard, with considerable resonance on percussion; in a fortnight more this increased, and the natural respiratory sound became audible at the upper part, with large bronchial rales in other portions of the lung; bronchial respiration gradually disappeared, and was succeeded by mucous rales, which again were replaced by moist and dry crepitus; from this period the patient continued to recover.

The other four cases scarcely require remark. Dr B. believes that case three proves that the amount of contraction after recovery, is in the direct ratio of the intensity of the previous inflammation; and that cases three and four show that disease, to a very serious extent, may exist without there being "any prominent sign of chest affection." In short, all the four cases demonstrate how possible it is to overlook pleuritis, and its effects on children.

66.—*Simulated Œdema of the Left Arm.*—A WOMAN, aged forty years, said to be from the provinces, came expressly to Paris in order to be treated for a considerable œdematous swelling of the whole of the left arm, a swelling which she attributes to a commencing elephantiasis, one of her sisters having, according to her statement, had a similar affection of the arm. She was received at La Charité, in the wards of M. Cruvelhier. The limb was placed upon a pillow, forming an inclined plane from the axilla. An attentive examination of the arm, axilla, shoulder, and breast, led to the discovery of nothing which explained the singular and anormal swelling. The inclined position caused no change in it for several days. Her general health was excellent. The swelling of the limb was more evident in the morning and during the day, and greater in the arm than in the forearm and hand. It did not, however, resemble an ordinary œdema; the pressure of the fingers left no depression, nor was the skin hard, doughy, or otherwise diseased. Early one morning the patient was surprised with a tight ligature, which she had placed during the night, round the upper part of the arm near the axilla, which had strangled the circulation. The following day, not having a cord to tie round the arm, she produced the same effect by pushing up the sleeve of her chemise, and twisting the edge of it strongly, so as to compress the limb. The deception could easily be perceived on carefully examining the superior part of the limb, where a circular mark was observed made by the ligature.—*Annales de Thérapeutique*, November 1847.

67.—*On the Treatment of Diarrhœa accompanying Dentition.* By Dr HUGHES WILLSHIRE.—IN a course of lectures on the diseases of children, Dr Willshire observes, that both in this country and on the continent, two very opposite views are held as to the treatment to be followed in the

less severe forms of the intestinal irritation; one party believing that the diarrhœa should not be put a stop to, as it serves as a safety valve,—a derivation preventing more serious symptoms during the continuance of the gingival irritation; the other party consider that it is only productive of debility, is a phenomenon of disease, and should be at once stopped. A middle course is the best to pursue. If but a slight sympathetic derangement is produced, the infant be not debilitated or thin, and seems likely, as many children do, to bear it well, or the stools not very watery or serous, the better way is not to interfere, either as regards the intestines or the gums. But it will be quite a different matter when the diarrhœa becomes catarrhal, the stools very frequent and watery, or greenish, and the gingival irritation great. The intestinal excitement must be stopped, and the gums at once looked to; for the very worst form of diarrhœa may arise—that of enterocolitis. In arresting the disorder you must, of course, first of all attend to the condition of the gums, for two reasons; first, because here is seated the main cause; secondly, because, if you stop the diarrhœa by giving astringents, and leave its cause still in operation, you will perhaps have excito-motory symptoms affecting the child. If the gums appear tense, swollen, tender, very red, or hot, lance them immediately, then let the child be put to the breast, or encouraged to sip some warm demulcent liquid, to encourage slight bleeding; afterwards, have it put into a warm bath, and then sent to sleep. Afterwards, keeping your eye upon the gums, have recourse to some of the remedial agents proper for catarrhal diarrhœa. You must not, like the French, think lancing the gums of no great moment; you must not, like some of us, go on lancing for every thing, and two or three times a-day. In many of these cases, in addition to the remedies already spoken of, you will find, when the mouth is hot, or the tongue coated, or the child feverish, two or three grains of the nitrate of potassa dissolved in caraway or cinnamon water, or in thin mucilage, and placed in the mouth every two or three hours, of benefit.—*Medical Times*, Jan. 8, 1848.

IV.—PRACTICE OF SURGERY.

68.—*On Staphyloma.* By M. Sichel.—M. Sichel considers staphyloma of the cornea to be formed as follows:—When the transparent cornea is the seat of ulceration, more or less deep or broad, its laminæ become, in a great measure, thinned and destroyed, either on its anterior or posterior surfaces. An exudation of fibro-albuminous matter repairs this loss of substance. When the exudation is sufficiently copious, or quickly thrown out, when it is disposed uniformly over the whole of the ulcerated surface, and in the enlarged interstices of the corneal lamellæ, the condensation and solidification of this plastic substance gives rise to a cicatrix of a whitish colour, and of variable thickness. This cicatrix is, however, sufficiently firm to resist the impulse which the muscular contractions of the eye give to the refracting media; hence the curvature of the cornea is not much altered, and its form is not very different from that of the normal state. But frequently, from causes which are not as yet known, the fibro-albuminous exudation is insufficient, and is thrown out only over the ulcerated surface, without having a greater degree of thickness over the thinnest parts, and without penetrating uniformly into the interstices of the lamella. This exuded matter, then, only fills imperfectly the hollow in the diseased membrane caused by the loss of substance. The inequalities of its surface become partly effaced, but its tissue remains thin, and incapable of resisting the impulse given to the contents of the globe by the action of the muscles. The affected membrane, while it becomes opaque, is at the same time distended. The opacity is caused, not so much by an exudation into its tissue, as by the deposit on its surface, and into its hollows, of a fibro-albuminous matter, not very thick at first, on which there forms a sort of epithelium. It is by the distension that the cornea, while losing its transparency, assumes an abnormal form, which constitutes opaque staphyloma of the membrane. Sometimes it is conical, more or less pointed when the thinning takes place only in the central part of the membrane, without the circumference being much involved; or least, when the centre has undergone a deeper loss of substance than the lateral parts. At other times, when the whole surface of the cornea, thinned almost to the same degree, becomes equally too feeble to resist the distension, the form of the tumour becomes hemispherical or globular.

Staphyloma of the iris, M. Sichel thinks, can hardly, in many cases, be distinguished from that of the cornea. It is thus formed: destructive ulceration of a corresponding part of the cornea, allows a greater or less portion of the iris to pass through it, which is thus exposed and forms a prominence. This, which is moveable at first, and without any covering, soon becomes covered with a fibro-albuminous exudation, which is thrown out in consequence of the continual irritation of the atmosphere, or of foreign bodies floating in it, and especially of the friction of the eyelids. This fibro-albuminous matter unites first the circumference of the prolapsed iris to the edges of the ulcer in the cornea; it then covers the whole surface of the prolapsed membrane with a layer of plastic matter, which is transformed into false membrane. If this false membrane does not become sufficiently firm to present an obstacle to the distensive action which is kept up on the tumour by the contents of the globe being continually pushed forwards by the contraction of the muscles, the staphyloma goes on increasing in size; but although it does not cease to be distended, it does not become any thinner. On the contrary, except in some rare exceptions, it becomes more and more thick by the deposit of successive new layers of fibro-albumen, so that its size and thickness are in general in direct proportion the one to the other.

The treatment of staphyloma M. Sichel divides into the prophylactic, the pharmaceutical, and the surgical.

The prophylactic consists in opposing the ulceration by a strictly antiphlogistic treatment, which ought to be continued even when there is a fibro-albuminous or purulent infiltration into the layers of the cornea. He condemns all astringent and irritating collyria, especially the nitrate of silver, which, he says, ought never to be used except in the form of pencil, and which ought only to be passed very lightly over the ulceration, so as to produce a very thin eschar, capable of protecting the surface from the friction of the lids and other sources of irritation; but not to cause any further loss of substance on the falling off of this eschar. As soon as the ulceration becomes so deep as to give rise to the fear that the cornea will be perforated at some point, it is of importance to dilate the pupil as much as possible by means of some mydriatic, so as to withdraw the free margin of the iris from the point, which is either perforated, or which will soon be so. This is the only way of preventing its escape by the accidental opening, or from contracting adhesions when the aqueous humour flows out. The only exception is, when the opening takes place, or threatens to do so near the circumference of the cornea. In this case, it is evident that the retraction of the iris towards its adherent margin has no other result than that of augmenting the chances of a prolapse, by drawing the pupillary margin towards the point where there is loss of substance. The mydriatic which M. Sichel recommends for this purpose, is a solution of belladonna, which, he says, he has found less irritating than atropine.

As to the pharamaceutical treatment, M. Sichel states, that to cure the staphyloma when it is not too large, all that is necessary is to follow the plan which nature itself indicates; and which is to irritate slightly the surface of the tumour, so as to produce an exudation of fibro-albuminous matter, and to transform this matter into a dense and firm false membrane. For this purpose, he uses remedies which possess an irritating and sedative action at the same time. The laudanum of Sydenham is that which he uses at first, diluted with water, and gradually increased in strength as the patient is able to bear it. Sometimes he employs the pencil of the nitrate of silver, passed very lightly over the surface of the tumour, once or twice a-week, to cause an exudation of fibro-albumen. When, by the means mentioned, the false membrane has become firm, contracted, and flattens the staphyloma, the nitrate of silver may be given up, and the laudanum only used, alternating it occasionally with an ointment of the red oxide of mercury, used very weak, and rubbed on the edges of the lids at bed-time.

The surgical treatment is employed when the staphyloma is so large as to prevent closure of the eyelids, and when it keeps up a constant degree of irritation in the eye and its dependencies; or when the use of the pharmaceutical remedies have not succeeded in arresting its development. Cauterization M. Sichel condemns; he recommends rather the removal of the tumour by means of the knife. This is to be done either after the manner of Beer or Scarpa. The former, which is the best, consists in removing either the whole, or at least two-thirds, of the staphyloma by means of a cataract knife and scissors; in the latter, and which has also been adopted by M. Walther, the central and lenticular portion only of the staphyloma is removed. M. Sichel describes the manner of performing these two operations; he then mentions the accidents which occur during and after the opera-

tion, and which seem generally to rise from one of two causes; the first being, the removing of the staphyloma either too near the edge of the sclerotic, or taking away a portion of that membrane itself; the other being the stopping too suddenly the flow of blood which takes place during the operation. Lastly, he describes the manner in which cicatrization of the wound takes place after the operation for the removal of the staphyloma.—*Archives Générales de Medicine*, July and Aug. 1847.

69.—*Method of arresting Bleeding after the Excision of Internal Hemorrhoids.* By Mr Vincent.—"Surgeons have, for the most part, been deterred, on account of the bleeding that has often followed, from cutting them off. But it must be remembered, that if there be any coagulum left in the tumour after the incision, it will go on bleeding: and I believe that very generally this is the way by which the bleeding is kept up after the pile has been excised, which may have given rise to the great apprehension of hemorrhage in these operations. I have, with few exceptions, adopted the operation of excising internal piles, and with the precaution and the use of an expedient I have now to mention, I have never been troubled with any serious extent of bleeding. This remedy is simply a solution of sulphate of iron in water; a grain to an ounce seems quite strong enough. If this be injected in small quantity, so that it may be retained after the operation, I believe it will hardly ever fail of preventing bleeding. I consider the advantages of excision over tying to be, that the operation is completed at one suffering, and is almost instantaneously executed. That the wounds being simple, when the membrane is restored to its proper place, there is the better chance of the adhesive process being so far carried out as ultimately to retain the membrane in its place, and prevent the continuation of the protrusion, if straining on the parts can be prevented for three days. Indeed, I have seen the prolapse quite cured by the excision. In either case the operation should be restricted to the mere pile, and not include any part of the membrane around it. I have occasionally, at the instance of patients, tied piles, but have found the pain more severe, and the swelling and soreness in the succeeding days after the operation have produced greater suffering, and the parts have seemed more readily to be protruded by the dejections than after the excision."—*Observations on some parts of Surgical Practice.*

70.—*On the treatment of Prolapsus Ani.* By Mr Vincent.—"Of late I have found such great advantage in employing the sulphate of iron in prolapsed bowel, that the operation may very often be dispensed with, and the patient quite cured merely with the use of this remedy. Very lately I had in the hospital two cases of the worst sort,—the one of twenty years' standing, with a great protrusion and abundance of bleeding piles, who in about three weeks left without any protrusion or bleeding: declaring himself to be in a state of comfort that he had not known for so long a time. The other came from one of the institutions that offer great pretensions in the treatment of this class of cases. He was very bad, having both internal and external piles, and the bowel descending largely and most readily: he was completely relieved in about a month. Other cases of a slighter kind have been set to rights in not much more than a week. The patient should be kept in bed of course, so that there should be every facility for the repose of the bowel; and after it is cleansed out, a small quantity of the injection should be daily thrown up, and retained. If the stomach can take balsams, they seem well adapted for this disease."—*Observations on some parts of Surgical Practice.*

71.—*Extraction of a Needle from the Substance of the Heart.* By J. G. Graves.—The author, in a letter to the New York Annalist, relates a singular case of suicide which occurred under his observation in Nashua. He was called to a young man, whom he found nearly lifeless from loss of blood, which proceeded from three cuts in the neck so deep as to divide entirely the larynx, and one in the situation of the fifth left rib, extending down to the bone. On the patient rallying after the vessels had been secured, he said that, before using the razor which effected the cuts, he had put a needle into his side between the fifth and sixth ribs; but that, fearing it would not effect his purpose, he had recourse to the razor. On examination, there was discovered between the 5th and 6th ribs on the left side, a puncture of the skin. The breathing was exceedingly difficult and painful, forcing him to cry out: the pulse was rapid and strong. Dr Graves then made an incision at the site of the puncture down to the intercostal muscles, but without finding any thing. He next dissected down to the pleura, and, on pressing gently with his finger, he thought he felt the end of the needle. This encour-

aged him to incise the pleura, after which, by dilating the external wound with retractors, he could distinctly see the heart act with the needle in it. He extracted the needle by means of a pair of forceps, and a forcible stream of blood followed. After this operation the patient became more quiet, and the breathing comparatively easy. He improved daily up to the sixth day from the operation, when he was attacked with pains of the side, and died on the 8th day after the operation. On examination, the pleura was slightly inflamed round the wound. On the inner surface of the pericardium, there was a puncture resembling a leech-bite. The pericardium contained no blood. Where the needle had entered the left ventricle, there was a small membranous sac formed, which contained pus. Otherwise the heart was natural.—*The British American Journal of Medical Science*, December 1847. [The information contained in the above report, is by no means satisfactory as to the cause of death in this case. Was it owing to the wound in the throat, or to the thoracic lesion? The symptoms would seem rather to point to the latter; but a pleura "slightly inflamed," and a small abscess in connexion with the left ventricle, do not seem adequate causes for the fatal result.]

72.—*Successful Amputation at the Hip-joint; Employment of Ether.* By M. HÉNOT of Metz.—In a memoir presented to the Academy of Medicine of Paris, on the amputation at the hip-joint, M. Hénot relates the case of an hospital-servant (male) twenty-six years of age, who had a large exostosis of the right femur, involving the bone as high as the trochanters. There was also disease of the medullary cavity with perforating fistulas of the bone, abscesses of the thigh, and hectic fever; under which circumstances, amputation at the hip-joint was proposed as the only means of saving life. The operation chosen was that of Beclard, by anterior and posterior flaps, but the posterior flap was prolonged by a third, and the anterior shortened, so as to bring the cicatrix more in front. Ether was inhaled by the patient previous to the operation, which, with the ligature of the arteries, was accomplished in 5½ minutes, and was quite unattended by pain. The wound was brought together by six points of interrupted suture; it was ten inches in length. Four-fifths of it healed by the first intention; the remainder was kept open by a moderate suppuration from the glenoid cavity, which continued six weeks, and then declined insensibly, permitting of the complete cicatrization of the wound on the 90th day from the operation. The ligatures came away from the 18th to the 44th day. The process of cure was entirely satisfactory, and the result was an excellent cushion of flesh for the application of artificial means of support.—*Archives Générales de Médicine*, Dec. 1847.

73.—*Aneurism of the Carotid Artery, simulating Cynanche Tonsillaris.* By Dr DUKE.—A married man, aged thirty-two, about twelve months after a severe blow on the head, was attacked with symptoms of ordinary catarrh and sore throat. He had, since the accident, which he considered as the cause of his symptoms, been subject to occasional headache, and a rushing noise in his head, as of wind. When seen, there was quick pulse, cough, and fever; the right tonsil and side of the fauces appeared inflamed. During the next two days the swelling extended, causing little pain, but considerable difficulty of deglutition. On passing the finger into the mouth with a view to detecting fluctuation, it was discovered that a strong pulsation existed in every part of the tumour, which was soft and elastic to the touch. The stethoscope, applied behind the angle of the jaw, detected a loud bruit. This revealed the true nature of the case, but next day, the patient being in considerable pain, requested relief from another medical man who happened to be present. The tumour was punctured with a bistoury, and a jet of arterial blood followed; this, however, was commanded by pressure, which was kept up till the following day without more than a few ounces of blood being lost.

Dr Duke then tied the common carotid artery in the usual manner; pulsation immediately ceased in the tumour. There was no subsequent hemorrhage; but the power of deglutition was completely lost for five days after the operation, and then suddenly restored. At the end of five weeks, being apparently quite well, he went to visit some friends, and was induced to drink spirits. During the night smart hemorrhage occurred from the mouth, which proved fatal before assistance could be obtained. No *post-mortem* examination was allowed.

Dr Duke considers this a case of diffused or false aneurism from a wounded or diseased condition of the vessel, the result of the blow. He thinks that the vessel was probably injured by a spiculum of bone, which had caused disease and soft-

ening of its coats; and that, during one of the fits of coughing to which he was subject, the artery had been ruptured and the blood extravasated into the cellular tissue, causing the swelling visible in the throat. This was entirely destitute of visible pulsation, although to the touch the evidences of aneurism were very evident. —*Surgical Society of Ireland, from the Dublin Medical Press.* Feb. 2, 1848.

V.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

74.—*Vomiting during Pregnancy.* By Dr Churchill of Dublin.—In regard to this affection, which, in the mild form of "morning sickness," so frequently attends upon pregnancy, commencing generally about the fifth or sixth week, and continuing for one or two months, Dr Churchill lays down the following propositions:—1. In some cases vomiting never comes on. 2. In other cases it commences very soon after conception; sometimes on the very day of conception. 3. It may not begin till the two or three later months of gestation. 4. In some cases it does not happen in the morning, but is delayed till after a meal, or even till bed-time, and then it may continue all night. 5. It may continue during the whole period of gestation. 6. It may commence in the morning and continue during the entire day, and beyond the usual period of its cessation. It is to the consideration of this last condition that the present paper is devoted. Patients the subjects of it, become extremely exhausted and depressed; and if the vomiting do not cease spontaneously, or in consequence of treatment, the results may be even fatal, and that before gestation is completed.

Dr Davis (*Obstetric Medicine*, Vol. II. p. 87) relates a case that proved fatal at the eighth month. Dr Ashwell relates a case fatal at the seventh month, (*On Parturition*, p. 194). M. Dance relates two fatal cases, (*Med. Chir. Rev.* 1829, Vol. VIII. p. 149.) Dr Johnson relates a case fatal at the fourth month, (*Lancet*, March 3, 1839, p. 825.)

To avert the fatal result of some cases of obstinate vomiting during pregnancy, Dr Denman proposed the induction of premature labour. Of this practice Merriman records a successful case, (*Med. Chir. Trans.* Vol. III. p. 139). Dr Burns relates one case where it was twice performed, (*Principles of Midwifery*, p, 254). Dr Davis states he has resorted to the practice with success three times, (*Obstetric Medicine*, Vol. II. p. 871).

Dr Churchill relates two cases in which he followed this practice. The patients were aged twenty-six and forty respectively; in the one abortion was induced in the fourth, in the other, in the third month. In both the vomiting was so severe and incessant as to threaten life, and was quickly and completely relieved by delivery. The first made a good recovery. The second, however, who had been affected with severe diarrhœa before the vomiting commenced, was seized two days after delivery, with a violent return of the same complaint under which she sank in six days.—*British Record of Obstetric Medicine*, Nos. I. and III.

75.—*Induction of Premature Labour.* By Dr Van Hengel.—In the following cases premature labour was induced by puncturing the membranes. Details sufficient to allow us to judge of the precise mode in which the various operations were performed, have been unfortunately neglected by the author. But, judging from the instruments specified, and other points in the history of the cases, it appears that puncturing the membranes in such a manner as to draw off only a small quantity of the waters was the plan resorted to.

Case I.—A healthy female, twenty-four years of age. Contraction of the brim of the pelvis. At the beginning of the ninth month the os uteri was opened up by means of the finger, and the membranes pierced by Reissinger's instrument. After twelve hours pains supervened. In consequence of the shoulder presenting, the child was turned and delivered. It was born dead.

Case II.—A strong robust woman—had already been delivered of five children. The first was born naturally in the eighth month of pregnancy; the four others at the full time, by means of the forceps. All the infants were still-born. In the sixth pregnancy, the membranes were pierced by Fried's instrument at the end of the eighth month. After twelve hours pains commenced. A bag of membranes was protruded, and on bursting gave issue to a considerable quantity of water. The breech presented and the infant was soon delivered, but was dead.

Case III.—A strong woman—had twice

previously been delivered with difficulty, of dead infants by means of the forceps. In the third pregnancy labour was induced at the end of the eighth month, by piercing the membranes with a silver male catheter, which evacuated at least two ounces of the waters. After two hours, pains supervened, and ceased entirely after nine hours' duration. The child's head becoming impacted, the forceps were applied, and a living child delivered. It died in three days.

Case IV.—A nervous delicate woman—had had three abortions, and one premature labour at the beginning of the eighth month. At the end of the seventh month of her fifth pregnancy, such symptoms supervened as to cause apprehension for the life of the fœtus. On the first day of the eighth month, the pulsations of the fœtal heart were but indistinctly heard. The membranes were pierced, first in the forenoon and afterwards in the evening of the same day, and a pretty large quantity of the waters was evacuated. Next day at noon pains began. Delivery was completed by the forceps. The child was dead.

Case V.—A healthy woman of small stature—had already borne, with great difficulty, three dead infants of large size. At the end of the eighth month of her fourth pregnancy the membranes were pierced with a large male catheter, and a half quart of the waters drawn off. Afterforty hours pains commenced, and a lively child was born without assistance.

Case VI.—A healthy young woman—had already been delivered by the forceps of a dead child. At the beginning of the ninth month of her second pregnancy, the membranes were pierced with a male catheter, at which time the mother and operator both felt strong movements of the child. Pains commenced after twenty-four hours. The arm presented. A child apparently still was delivered by turning.

Case VII.—A small but healthy woman—had already borne five children, three of which were dead, after severe labours. Four weeks before the end of her sixth pregnancy the membranes were pierced by the catheter, and at least two quarts of the liquor amnii drawn off. The labour was easily terminated in thirty-one hours. A scrofulous and diseased child was born with some signs of life, but died very soon afterwards.

Case VIII.—The same woman as *Case* V. was, fourteen months afterwards, again in the same condition as before, and at the end of the eighth month the membranes were pierced. After twenty-seven hours, pains began, and the child presenting by the breech, was born with some signs of life, but soon died.

Case IX.—In this patient the first labour was terminated by perforation. In her second labour she was delivered with great difficulty, by means of the forceps, of a living child. The brim of the pelvis was found contracted. At the beginning of the ninth month of her third pregnancy, the membranes were pierced with a catheter. Thirty hours afterwards pains began, and a living child was born.

Case X.—Twenty months after a previous premature labour (*see Case* III.), this woman was again at the commencement of the ninth month of pregnancy. The membranes were pierced high up. After upwards of twenty-four hours, pains set in, and the child was born apparently still, but soon completely recovered.

Case XI.—This woman had been delivered by craniotomy when thirty-two years old. In this pregnancy the membranes were opened with Meissner's instrument. After thirty-four hours the pains began, and a fine female child, presenting by the breech, was presently born dead.

Case XII.—This woman, now in her sixth pregnancy (see *Cases* V. and VIII.), had the membranes perforated by Meissner's instrument, and at least one quart of the waters escaped. After two days pains set in, and a small female child was born alive.

Case XIII.—At the end of the eighth month of her fourth pregnancy, this woman (see *Case* IX.) had the membranes perforated by Meissner's instrument, and about a half quart of the waters was evacuated through the canula. In thirty-seven hours pains commenced. The child was born alive, but died on the third day.

Case XIV.—This woman, with the pelvis deformed by malacosteon, was, in her first labour, delivered with difficulty of a dead child by the forceps. Six weeks before the end of her second pregnancy, the membranes were pierced with Meissner's instrument, and a half quart of waters evacuated. No pains having supervened after twenty-four hours, the membranes were pierced at the os uteri. Pains commenced early

on the third day after the first perforation. The forceps were required to deliver the child, which was born alive.

Case XV.—In the woman mentioned in Cases IX. and XIII., premature labour was again induced at the end of the eighth month of pregnancy. The membranes were pierced three times. Very little water escaped, and was followed by some blood. After thirty-one hours pains set in, and in an hour a fine child was born alive. Three depressions were found on the right breast of the child, evidently made by the instrument after traversing the membranes. There were also two little holes in the placenta produced in the same way, and manifestly the source of the blood which flowed at the time of operation.

Five of these women, our author remarks, who had never before borne but dead infants, have now, in all, nine living children among them. In the other cases the six children were dead-born. Of these one was dead before labour; the fatal result to other four of them arose from malposition; one being a shoulder, and three being breech presentations. Thus it appears that the lives of eight children were preserved, which would probably otherwise have been lost. Our author believes, that of all the methods of inducing premature labour, the piercing of the membranes is at once the simplest and the surest.—*Schmidt's Jahrbucher*, 1847.

76.—*Prolapsus of the Uterus during Labour—Subsequent Reduction and Cure.* By M. Naudin.—This woman was in labour with her third child. After the pains had continued for forty-eight hours, the waters having been prematurely evacuated, and the os uteri remaining rigid and undilated,—the uterus was suddenly precipitated outside the vulva. M. Gassaü dilated the rigid os uteri with the hand, and presently the child was born, and soon followed by the placenta.

The uterus was replaced, but was again protruded during an effort in making water. It was again reduced, and retained by a T bandage. In ten days this woman was able to walk about, and, on examination, the os uteri was found at its usual height in the pelvis.—*Gazette Médicale*, Dec. 18, 1847.

77.—*Simple Metritis after Delivery.* By Dr Willemin.—M. Willemin maintains that this affection is most frequently produced by deep laceration of the neck of the uterus, an accident which he believes to happen in most deliveries, although generally not to a serious degree. In regard to the symptoms of metritis, he denies entirely the existence of morbid sensibility in the vaginal portion of the neck of the uterus, a symptom which M. Chomel particularly points out. The state of the lochiæ varies extremely; but the most important change on them is an unusual persistence or even increase of their sanguinolent character after the first week, whilst in the malignant puerperal metritis the lochiæ are generally suppressed. Contrary to the statement of Duges and Chomel, M. Willemin asserts that the urinary functions are very rarely disturbed. —*Archives Générales de Médecine.* Dec. 1847.

78.—*Intestinal Hernia protruded through the Uterus.* By M. Le Chaptois.—This woman, æt. sixty, mother of seven children, had had, for a long period, a vaginal hernia, for which she had never sought advice. In consequence of incessant suffering from dysuria, tenesmus and dragging pain in the hypogastrium, she lost the erectness of her attitude, and was very much bent. M. Le Chaptois, on being called to her aid, found an enormous mass of the small intestines and colon protruded through the lacerated uterus. A tumour, larger than the fist, lay between the thighs. It consisted of the extremely attenuated walls of the inverted uterus. Towards its right side there was a laceration giving issue to the intestines. Her pulse was small, she had hiccup, cold sweats, and frequent faintings. The hernia was successfully and completely reduced. Subsequently vomiting and severe convulsions appeared; but after free evacuations of the bowels, her recovery proceeded steadily till the third month, when a peripneumony seized her, and proved fatal in fifteen days.—*Gazette Médicale*, Dec. 18, 1847.

79.—*Placentitis occurring twice in the same woman.* By Dr Van Hengel.—In February 1844, a woman, thirty-three years of age, having arrived at the exact time when her tenth menstruation would have taken place, was delivered of a child, of whose death there had been distinct signs three weeks previously. The fœtal portion of the placenta had degenerated into a substance resembling cartilage, of a greyish-white colour; on the uterine surface it was still spongy and porous in several spots. In February 1846, the same woman was

again arrived near the time of her delivery. She stated, that a month previously she had had a slight attack of fever, after which she was seized with severe pain in the right side of the belly, in which part she felt as if there were a weighty stone lying within her; at the same time she suffered from thirst, sleeplessness, headache, and loss of appetite. Subsequently she was troubled at various times with bloody, watery, and purulent discharges from the vagina.

On the 26th February the pulsation of the fœtal heart could not be heard, nor could any movements of the child be felt by the mother or her medical attendant; and at the same time she complained of nausea and a sensation of cold in the belly. Some days after, she was delivered very quickly of a child which appeared to have been long dead. The placenta was circular, curled inwards at the edges, greyish-yellow in colour. On the fœtal surface it was dark brown or almost black; and it was so indurated as not to bend when held out by one point.—*Schmidt's Jahrbucher*, 1847.

80.—*Mortality of Ovariotomy.* By M. VELPEAU.—The mortality of this operation is frightful, involving more than a half of the patients subjected to it, and carrying off, in a few days, young and robust women. Hardihood like this (says M. Velpeau) must be opposed to the utmost.—*Gazette des Hopitaux*, No. XLIX.

[It is curious to observe how the mind of such an enlightened surgeon may be so pre-occupied as not to detect the obvious fallacy of the argument brought forward in the passage quoted above. The amputation of the thigh, an operation occurring every day, and on the propriety and utility of which the profession is agreed, carries off a *greater* proportional number of patients than ovariotomy. "Out of sixty-five cases, in which it (ovariotomy) had been perfected, twenty-five died, or between three and four out of every ten patients were lost." (*Monthly Journal*, January 1848.) Of 201 cases of amputation of the thigh recorded by Malgaigne, six in every ten perished.]

81.—*Duration of Pregnancy in the Human Female and the Cow.* By Dr LOCKWOOD.

I.—IN WOMAN.

Age.	No. of Pregnancy.	Duration of Pregnancy.
17 years.	...	270 days.
19 ..	1st.	272 ...
30 ...	1st.	276 ...
44 ...	7th.	284 ...

II.—IN THE COW.

No. of Cases.	Duration of Pregnancy.
50	Between 260 and 270 days.
556	... 270 and 280 ...
14	... 280 and 286 ...
1	... 290 ...

—*Buffalo Medical Journal.*

VI.—PSYCHOLOGICAL MEDICINE.

82.—FEUCHTERSLEBEN *on Mental Pathology.*—Body and mind are most intimately blended in every part of the structure of the living individual; and as the disorders of the mind are often removed by pharmaceutical remedies, so, on the other hand, the diseases of the body as frequently require the aid of the psychological physician. In disorders of the nerves especially, the physician can often effect nothing, if he do not, in the first place, direct his treatment to the mind. The numerous varying symptoms which, under the name of spasms, act so conspicuous a part in pathology, and, unhappily, as still more conspicuous a part in real life, are often removed most successfully and effectually by judiciously directing, controlling, and taking advantage of the state of the mind; and how few disorders are there of any organic system in which the nerves do not at least symptomatically suffer? We see, therefore, how extensive is the application of psychical methods of cure throughout the whole domain of the healing art. Numerous examples in proof of what has been advanced, may be found in the writings of psychological physicians, and especially in the admirable work of Marcus Herz, on Vertigo (1791, pp. 6—22); but our present business is to point out the use of psychological medicine in general, and to confirm the words of Schiller, "A physician whose horizon is bounded by an historical knowledge of the human machine, and who can only

distinguish terminologically and locally, the coarser wheels of this piece of intellectual clockwork, may perhaps be idolized by the mob; but he will never raise the Hippocratic art above the narrow sphere of a mere bread-earning craft."

Excursions for pleasure, rather than voyages of discovery, have been made in the domain of medical psychology; and a department of our science, which is as real and practically important as any other, has been treated as an amusement, and as if it had no connexion with the rest.

We cannot refrain, on this occasion, from warning you against an error so dangerous in all serious researches, and especially in ours,—I mean that dilettante spirit, unhappily so common, which loves to prate without an object, to confuse without improving, and to flatter with an appearance of knowledge. In what department has it more ample opportunity to practise its pernicious arts than here, where so much is still unexplored, so much inscrutable; and where the endless variety of intellectual energies so easily tempts us to pass the boundary of ascertained truth? Yet there are some meritorious inquirers who have been eminently successful in this branch; and it is our present business to appropriate to ourselves the fruits of their researches and meditations. Let us then set about it with earnestness and perseverance, deeply impressed with a sense of its great importance.—*Sydenham Society Translation*, pp. 9-12.

83.—*The Journal of Psychological Medicine, and Mental Pathology.* Edited by Forbes Winslow, M.D. No. I.—January 1848.—We hail with pleasure the publication of such a Journal, although we fear that, in the present state of such studies in this country, there may be found both a want of readers and a want of writers to support a separate periodical on this interesting branch of medical science. No. I., however, is a formidable enough brochure of 192 pages. We have gone over it with some degree of care, and with some interest too. It contains some good articles, but little, we fear, that will add to the present stock of knowledge possessed by all those who have devoted any attention to the treatment of the insane. Reviews of Dr Seymour's "Thoughts;" Dr Solly on the Brain; the Commissioners' Report; Dr Conolly on Asylums; Dr Thurnam's Statistics;—are, we think, already familiar to most readers of medical periodicals. And of the so-called "Original Communications," we think we recognise one as very familiar to our eyes, and one which must have been seen by the eyes of *our* "constant readers" also. The others contain nothing new; accounts of asylums already well known by the descriptions of Conolly and others; notices of a ball in an asylum all the way at Vienna, while we have them every week in our own asylums; of the influence of music on the insane; and the use of ether, while we have, long ago, passed from ether to chloroform! There is, however, one very excellent original paper on Puerperal Insanity of some length, and "to be continued," to which we may perhaps return when it is completed.

Under the head of "Medical Jurisprudence," we have an analysis of the case of Ovenston, and a defence by the editor, who was a witness in the case, of the medical evidence given. We confess that, in spite of *The Times*, it goes far to satisfy our minds of the justice of the verdict which led to Ovenston's acquittal.

84.—*The Consciousness of Right and Wrong; a Just Test of the Plea of Insanity in Criminal Cases.* By C. L. Robertson, M.D., &c. Edinburgh, 1847.—An interesting contribution to an interesting question; but one in which we think the author fails to make out his case. To make *the test* a just one, he endeavours to prove, that in all, or nearly all, cases of monomania, there is derangement, or disease of the moral principle. This would never be admitted in a court of justice. The plea of insanity would fail, therefore, and frequently does fail, in cases of monomania; and it fails, too, sometimes in cases where it should be sustained. It is an imperfect test, often departed from in our courts of law. It is the *imperfect appreciation* of the *motives* to right or against wrong action, which leads to crime among the insane, not the ignorance of right and wrong.

85.—*Localization of the Faculty of Language in the Anterior Lobes of the Brain.* By M. Bonnafont.—The author adopts the opinion of Bouillaud, that the faculty of speech is peculiarly dependent on the integrity of the anterior lobes of the brain. He adduces six observations in support of this view.

The first is that of a huntsman who received a wound from a ball, which entered the anterior part of the left temple, traversed the anterior lobes, and came out at the right temple. The substance of the brain protruded at the two openings. This man was conscious and intelligent, knew his companions, and remembered both recent and old-standing occurrences.

He had, however, lost the sense of smell, and was totally unable to articulate, although the voice remained entire.

The second case was a soldier who received a bullet wound above the right eye, the ball emerging above the left frontal eminence. He was only a short time under observation, but appeared to hear every thing said to him, and, on attempting to answer, produced only inarticulate tones.

The third case was that of a lunatic in the hospital of Nantes. When he first came under observation, he was able to express himself well, with the exception of a stammer in his speech. As the disease advanced, articulation became more and more difficult, till, at last, he could only speak three words, and was obliged to use signs almost entirely. On dissection, an osseous tumour, of the size of a walnut, was found pressing on the anterior lobes. the left of which had almost disappeared.

The fourth observation is unimportant.

The fifth case was of a sergeant who received a wound from a ball above the right ear. The ball appeared to have entered the brain, but was not found. A sound passed four inches deep into the cranial cavity. He remained conscious, knew his comrades, and answered various questions, but appeared to have lost, in great part, his memory of facts, and frequently expressed himself surprised at his own forgetfulness. He died in twenty hours. There was no dissection.

The last observation was in the case of an engineer in whom the left temporal bone above the ear was shattered, and several fragments driven into the brain, by a blow from a stone. The splinters of bone were extracted by operation. The memory was much diminished, but not altogether lost; the power of speech remained, although there was stuttering and difficult articulation, with loss of some words. He could write perfectly well the words which he was unable to pronounce. —*Recueil de Mém. de Med., Chirurg., &c.* 1x. 1846.

[There are few departments of physiology of such extreme difficulty to the rational physiologist, as that of the determination of the value of observations on the separate portions of the cerebral hemispheres. This arises, in part, from the very complicated nature of the functions involved, and partly from the very limited application of direct experimental research to the investigation in question. The present observations, and the result which their author has deduced from them, show strongly the necessity of extreme care in drawing any inference from isolated facts in such cases.

Andral (*Clinique Medicale*, tom. v. p. 382) has recorded 37 cases where disease or injury existed in the anterior lobes, with or without a lesion elsewhere. In 25, speech was lost; in 16, it remained. Further, he has seen 14 cases where the loss of speech concurred with a lesion of the brain, without the anterior lobes being at all involved.

Cruveilhier also (*Anat. Pathol., Livraison* 8) relates the case of an idiot in whom the power of distinct articulation was one of the few human faculties remaining, and in whom the anterior cerebral lobes were absent. This observation, if correct, clearly goes the length of neutralizing every fact adduced in support of Bouillaud's position.

We remember to have seen, last winter, in the Edinburgh Royal Infirmary, a case in which the articulation was affected in much the same way as in M. Bonnafont's third case. There was, for several days, impaired power of speech, and the loss of particular words. Latterly, there was strabismus, succeeded by coma and death. The cause of the symptoms was likewise a tumour, which, however, occupied the place of the left lobe of the cerebellum.]

86.—*On the Influence of the Penitentiary Regimen in producing Insanity. Academy of Medicine*, Paris, 3d January 1848.—M. Collineau read a report on a memoir by M. Joret, on insanity in the penitentaries since the execution of the ministerial ordonnance of 10th May 1839, which prescribes absolute silence by day and by night. M. Joret, after pointing out the causes predisposing to insanity, which affected the inmates of penitentiaries, referred the exciting causes to three principles,—1. The absolute silence enjoined; 2. Chagrin increased by the enforcement of this rule; and 3. The want of exercise. M. Joret reported nearly eight cases of insanity as occurring per annum in a population of about 300. Out of 30 cases, he ascribed 6 of maniacal delirium, and 8 of monomania, to the first cause; to the second, 2 of maniacal delirium, 1 of mania, and 7 of monomania; and to the third, 1 case of acute mania, and 7 of monomania. Out of these cases, there were only 7 cured.—*Gazette Médicale*, 8th January 1848.

VII.—MATERIA MEDICA AND THERAPEUTICS.

87.—*Chloroform—Chemistry.*—A new test of the presence of alcohol has been proposed by Dr Cattel. To about two drachms of chloroform he added a crystal or two of chromic acid, which, after a few moments' agitation, became changed into the green oxide of chrome, a result (according to Dr C.) positively indicative of the presence of alcohol. To the same proportion of chloroform was added a small proportion of bichromate of potash and sulphuric acid, the green oxide of chrome being produced in this as in the other instance.

Physiological action (a) *on Animals.*—M. Piouviez de Lille has performed a number of experiments on animals (fowls, dogs, and rabbits), with the view of ascertaining the most effectual means of counteracting the effects of an excessive dose of chloroform. We may state briefly, that artificial respiration succeeded in restoring animals in whom life was evidently nearly extinct. In several of the experiments, the inhalation of the chloroform was continued until the breathing had entirely ceased; yet, by the diligent use of artificial respiration, the animals were recovered.—*L'Union Médicale*, January 1848. M. Blanchet has, also by experiments on animals, established the efficacy of oxygen gas, when introduced into the lungs, in recovering animals poisoned by chloroform.—*Comptes Rendus*, 20th December 1847. MM. Girardin and Verrier detail several very carefully performed experiments on animals (horse, dog, cat), in some of which the chloroform vapour was inhaled, and in others the fluid was injected into the jugular vein. The results do not differ from those already recorded in this Journal. They directed particular attention to the state of the arterial blood, and conclude that complete insensibility may be induced without its undergoing any change of colour. It is only when the narcotism has been so intense as to produce (secondarily) asphyxia, that the arterial blood assumes a venous tint.—*Comptes Rendus*, 27th December 1847. [To obtain these results, care must be taken, in administering the chloroform by inhalation, to permit of a certain amount of atmospheric air entering the lungs, otherwise asphyxia will be induced as a primary phenomenon, as it would be by the respiration of nitrogen or other irrespirable gas. The anæsthetic property of chloroform is, however, quite independent of the asphyxia so produced, as is shown by its action when injected into the veins.]

(b) *On Man.*—M. Sédillot has observed, that individuals enfeebled by age or disease, and those of temperate habits, are readily affected, and the insensibility is in them persistent. In strong and healthy individuals, and in those habituated to the use of alcoholic drinks, the anæsthesia is slowly produced, and endures for a short period. In comparing the merits of ether and chloroform, he states, that when the inhalation of ether is suspended, the degree of narcotism produced does not afterwards become more intense. Not so with chloroform, the depressing action of which may display itself to an alarming extent after removal of the inhaler. "Twice," observes M. S., "I was seriously frightened by this approaching annihilation of life, and my experiments on animals show that my fears were well founded."—*L'Union Médicale*, January 13, 1848. The *nausea* and *vomiting* which occasionally accompany the action of chloroform, may be rendered less frequent by avoiding its exhibition after a full meal, or while the patient is under the influence of artifical stimulus.—Robinson, *Med. Gaz.*, February 4, 1848.

Poisonous Action. — An inquest was held on Tuesday, the 1st February, at Winlaton, near Newcastle-upon-Tyne, on the body of Hannah Greener, a girl of fifteen years of age, who died on the Friday previous, under the influence of chloroform. Mr Meggison, surgeon, said, "Hannah Greener died under my hands on Friday, while under the influence of chloroform, which I had given her for the purpose of producing insensibility during the operation of removing one of her toenails. I seated her on a chair, and put about a teaspoonful of chloroform into a table-cloth and held it to her nose. After she had drawn her breath twice, she pulled my hand down. I told her to draw her breath naturally, which she did, and in about half a minute the muscles of the arm became rigid, and her breathing a little quickened, but not stertorous. Her pulse was natural until the muscles became rigid. It then appeared somewhat

weaker, not altered in frequency. My assistant, Mr Loyd, then took the nail off. When the semicircular incision was made she gave a struggle or jerk, which I thought was from the chloroform not having taken sufficient effect. I did not apply any more. Her eyes were closed, and I opened them, and they remained open. Her mouth was open, and her lips and face blanched. I dashed some water in her face, but it had no effect. Some brandy was now given, a little of which she swallowed with difficulty. I then laid her down on the floor, and attempted to bleed her in the arm and jugular vein, but only obtained about a spoonful of blood. She was dead, I believe, at the time I attempted to bleed her. The last time I felt her pulse was immediately previous to the blanched appearance coming on, and when she gave the jerk. The time would not be more than three minutes from her first inhaling the chloroform till her death."

A post-mortem examination was made by Sir John Fife and Dr Glover. There was the ordinary degree of rigidity. The lungs are described as having been highly congested, crepitant, and mottled with patches of a deep purple or scarlet hue. They were not collapsed. Along the outer and anterior border of both lungs were several emphysematous bullæ of small size. The pulmonary tissue is described as having been filled with bloody froth, which was also found in the interior of the bronchi, mixed with mucus. The epiglottis was found reddened at the summit, and the mucous membrane of the larynx was redder than natural, and mottled with vascular patches. The sinuses of the larynx contained a quantity of dark mucus. The œsophagus was healthy, and the stomach was distended with food. The heart contained dark fluid blood in both its cavities, very little in the left. Its structure was healthy. The brain was congested, both externally and internally, and the ventricles contained more than the usual quantity of serum.

Sir John Fife and Dr Glover gave it as their opinion, that death was occasioned by congestion of the lungs, and that congestion they ascribed to the inhalation of chloroform. The verdict of the jury was in accordance with this opinion. No blame was attached to Mr Meggison or his assistant.

Dr Simpson, in commenting upon the above case, has declared his opinion, that, although the unfortunate patient certainly died when under the influence of chloroform, "the death resulted, not from its effects, but from the effects of the means used to revive her." He believes that, as the patient was in a state of syncope, and consequently unable to swallow when the brandy and water were administered, the fluid filled the cavity of the pharynx, and, covering the aperture of the glottis, presented an obstacle to the breathing, which, in the weak condition of the girl, was sufficient to produce suffocation. In support of this view, Dr S. points out, first, the close resemblance between the morbid appearances observed, and those produced by simple asphyxia; and, second, the differences existing between the morbid appearances in the case of the girl and those observed in the bodies of animals killed by the inhalation of chloroform. In Mr Meggison's patient, the blood found in the heart is described as having been dark and fluid. On the contrary, in the fatal experiments with animals, "firm coagula of blood were found in the heart in every case where chloroform was inhaled."[1] In some of the animals the lungs were engorged with venous blood; in others, healthy.—*Lancet*, February 12, 1848.

Another instance of death from the use of chloroform has occurred at Aberdeen, in the person of a druggist's apprentice named Arthur Walker. No correct description of the case has yet appeared. The following is derived from a newspaper:—The unfortunate youth had been in the habit of inhaling the vapour, to enjoy the pleasurable sensations which it excites, and apparently without inconvenience. On the fatal occasion, after inhaling it some time, he fell forwards on the shop counter, with his face resting on his arms. After some time his father, who had been sent for, raised the lad's head, when he immediately fell back, apparently lifeless. Medical assistance was obtained, the jugular vein was opened, but life was extinct.

[*By what Means are the Effects of an Overdose to be counteracted?*—The patient should be laid on the floor, with his head, if possible, near a current of fresh air. The breathing may be assisted by compressing the chest, and a little cold water ought to be thrown on the face and chest. If the symptoms continue notwith-

[1] See Dr Bennett's report of the Medico-Chirurgical Society's Committee on the Properties of Chloroform, in the Number for January of this Journal.

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standing these means, artificial respiration should be diligently practised, and the extremities briskly rubbed with hot cloths. The friction promotes the capillary circulation, and in this manner, undoubtedly contributes powerfully to restore the action of the heart and lungs. In extreme cases electro-galvanism should not be neglected; shocks may be transmitted through the chest, so as to assist the efforts at artificial respiration, and, in the case of syncope, a powerful galvanic current should be transmitted through the heart. A very powerful and rapid means of rousing the sinking powers of life, and one readily obtained, is found in the application of boiling water to the chest. This is effected by filling a glass or cup with boiling water, over the top of which a towel is placed, and then inverting the vessel on the breast of the patient. The efficacy of this application has been repeatedly displayed in the practice of M. Rayer of Paris. Individuals who, from disease, were so near death as to be completely insensible and speechless, have thus had intelligence and speech restored, while life was prolonged for a considerable time. Of course, it is understood that we only suggest its use in extreme cases. Dr Simpson directs attention to the impropriety of administering stimulant liquids by the mouth, when, from the state of insensibility, the power of swallowing is lost. The danger of their covering the aperture of the glottis, or entering the larynx, and so hastening death by suffocation, is indeed imminent.[1] When the saliva is secreted in large quantity, it will be advisable to place the patient on his side, to prevent it acting injuriously in the same way. The loss of the stimulants is scarcely to be regretted, as the other means above proposed are infinitely more efficacious.

The procedure here indicated is equally applicable, whatever view may be entertained as to the immediate cause or mode of death. This point is not yet satisfactorily determined. As with other cerebro-spinants, the death seems to be of a mixed kind, partaking both of the characters of asphyxia and syncope, the one or other predominating according to the dose, mode of exhibition, idiosyncrasy, &c. Experiment has shown that, when a small proportion of air is inhaled with the chloroform, asphyxia plays a prominent part in the symptoms.]

Administration.—Dr Snow prefers the use of an inhaler, which enables him first, to regulate with more certainty the quantity of chloroform inhaled; and, second, to secure more effectually the requisite admixture of atmospheric air. He disapproves of the rapid induction of insensibility (as in a quarter or half a minute), from the fear that the narcotism may increase to an uncertain and perhaps alarming extent after the removal of the inhaler. This danger is, he thinks, much diminished, when the narcotism is effected slowly, as in two or three minutes. Dr Snow's inhaler appears to be better adapted for the purpose than any that we have seen. For a description and drawing of it, we refer to the *Lancet* of February 12.

Therapeutic Action.—In midwifery and operative surgery it is still extensively used. Several cases have been published, showing its value in facilitating the reduction of dislocations.

As a calmative to procure sleep and allay excitement, it has been found serviceable in typhus fever.—(Fairbrother, *Medical Times*, January 1848), and in delirium tremens.—*Lancet*, January 15, 1848.

One case of its successful application in traumatic tetanus has occurred, verifying the hopes of its utility in this disease that we formerly expressed.

[In concluding the remarks on chloroform, we desire to express our conviction, that the occurrence of the two fatal cases above noticed, will not limit the application of this most useful remedy, the experience of its safety and usefulness being already so widely extended and firmly established. Like other valuable agents, as Dr Simpson observes, "it may be powerful for evil as well as for good." And we could point to several drugs in daily use, that, in proportion to the extent of their application, have more of evil to answer for. With proper caution, and *an improved method of administration*, we believe that serious accidents may be almost if not altogether prevented. It is to be hoped that the publication of the fatal cases will frighten the non-professional public from the use of chloroform, for the purpose of amusement or of exciting pleasurable sensations. Independently of the danger which the individuals themselves incur, the practice familiarizes the public with the powers of an agent which

[1] As in apoplexy, syncope and narcotism, so in spasmodic diseases, as tetanus and hydrophobia, the exhibition of liquids by the mouth is often fraught with danger. In the hospital of Vienna, while a nurse was giving some soup to a tetanic patient, a severe spasm supervened; he was unable to swallow the liquid, a quantity of which passed into the larynx, and suffocation was the consequence.

presents a ready instrument for the accomplishment of the worst purposes. The public safety requires that apothecaries should be allowed to sell it only when ordered by a physician.]

88.—*Vapour of Benzin as an Anæsthetic Agent.* By Dr SNOW.—This substance is prepared by distilling benzoic acid with slaked lime. It succeeded very well in four cases of tooth-drawing, producing no disagreeable effects, and, in an amputation of the leg, it completely removed the pain; but the patient had some convulsive tremors for about a minute, a result which Dr Snow considers peculiar to the benzin, as he has seen the same in several animals. Dr Snow concludes that benzin does not seem suited for severe operations. It has an aromatic odour, and from one to two drachms form a dose.—*Lancet*, Feb. 12, 1848.

89.—*Datura Sanguinea*, (R. Pav.)—To this, the natives give the names *Huacacahu, Yerba de Huaca* or *Borachero*, and they prepare from its fruit a very powerful narcotic drink called *tonga*. The Indians believe that by drinking the tonga they are brought into communication with the spirits of their forefathers. I once had an opportunity of observing an Indian under the influence of this drink. Shortly after having swallowed the beverage he fell into a heavy stupor; he sat with his eyes vacantly fixed on the ground, his mouth convulsively closed, and his nostrils dilated. In the course of about a quarter of an hour his eyes began to roll, foam issued from his half-opened lips, and his whole body was agitated by frightful convulsions. These violent symptoms having subsided, a profound sleep of several hours succeeded. In the evening I again saw this Indian. He was relating to a circle of attentive listeners the particulars of his vision during which, he alleged, he had held communication with the spirit of his forefathers. He appeared very weak and exhausted.—*American Journal of Medical Sciences, from Tschudi's Travels in Peru.*

90. *Case of Traumatic Tetanus cured by Donovan's Tincture of the Resin of Indian Hemp.* By MATTHEW M'GARVEY, Surgeon.—A man, aged twenty-three, sustained a slight wound by a reaping-hook in the first joint of the two forefingers of the right hand. No danger was apprehended until the seventeenth day, when symptoms of tetanus presented themselves; and on the twenty-first day, when Mr M'Garvey first saw him, the tetanic spasms were frequent and very severe. At seven P.M., and every hour afterwards, until twelve P.M., he was given a dose of from twenty-five to thirty drops of the tincture. After every draught, the frequency and severity of the spasms were diminished. He passed a good night, and next day was much better. The same dose was continued every two hours for three days with steady improvement; and, on the fourth day of treatment, he was able to get out of bed without assistance.—*Dublin Quarterly Journal of Medical Science*, February 1848.

91. *Pharmacy.—Tartrate of Magnesia.* By M. AVIAT.—In our last we noticed the introduction of the citrate of magnesia by the French pharmaceutists as a substitute for the sulphate of the same base. The tartrate of magnesia is also soluble, and, according to M. Aviat, has likewise very little taste. It may, like the other, be made into a lemonade by the aid of lemon syrup. Moreover, this salt is equally active as a purgative, and possesses a great advantage over the citrate in its cheaper price and easier preparation. By adding together 15½ oz. of tartaric acid, dissolved in 20 lbs. of distilled water, and 3 oz. 1 drachm of freshly calcined magnesia, held in suspension by 15½ oz. of distilled water, a solution of tartrate of magnesia may be obtained, sufficiently concentrated that a dose of 15 oz. of the liquid acts as a certain and easy purgative.—*Journal de Chimie Méd.*, August 1847.

92.—*Oil of Male Shield Fern for Tænia.* —This oil well merits the attention of the profession, so many have now borne testimony to its efficacy as a vermifuge. A woman was admitted into La Charité, having had symptoms of tape-worm for many years. The characters of the worm having been well ascertained, by the exhibition of a dose of castor oil, M. Rayer prescribed seventy-two drops of the ethereal oil of male fern, to be made up into twelve pills, six of which were taken in the morning and six in the evening; two hours after the exhibition of the last pill, 1½ oz. of castor oil were given to the patient, who expelled in numerous fragments sixty-six centimetres of tænia. The accidents have since completely ceased, and no return of the parasite in the motions has been noticed.—*Braithwaite's Retrospect, from Medical Times*, June 1847.

VIII.—DIETETICS, HYGIENE, AND MEDICAL POLICE.

93. — *Observations on the peculiar Diseases to which the Famine of last year gave origin, and on the Morbid Effects of insufficient Nourishment.* By Daniel Donovan, M.D., Skibbereen.—In the above district, whose name has become familiar to every one, famine and pestilence broke out earlier, raged more severely, and committed greater ravages than in any other part of the kingdom. Dr Donovan's ample opportunities of observation here brought him in contact with many forms of disease new to him, and undescribed by medical authors. These he proposes to designate famine cachexia, or lingering starvation; famine fever; famine dysentery; land scurvy; anemic dropsy; stomatitis and pemphigus malignus; abortion and asthenic sterility. Although at all times cases of death occur in Ireland which are traceable to insufficient nourishment, few persons previous to last year had seen human beings die from absolute want of food. In most cases, even those who died of starvation could procure some food, which preserved life until exposure to cold or some other accidental cause extinguished the feeble spark. In many instances diarrhœa, asphyxia, or syncope preceded death, and thus in many cases the death may have been attributed to disease, although it was, in reality, the result of imperfect alimentation.

Symptoms of Starvation.—The persons who have suffered from starvation describe the pain of hunger as at first being very acute, but after want of food for twenty-four hours, the pain subsides, and is succeeded by a feeling of weakness and sinking, especially felt in the epigastric region, with insatiable thirst and distressing feeling of coldness over the whole body. In a short time the face and limbs become frightfully emaciated; the eyes acquire a most peculiar stare; the skin exhaled a peculiar and offensive fetor; and is covered with a brownish filthy looking coating, almost as indelible as varnish. Dr Donovan first supposed this to be encrusted filth, but was subsequently convinced that it was a peculiar secretion poured out by the exhalants of the surface. The sufferer tottered in walking like a drunken man, his voice became weak as in cholera, he whined like a child, and burst into tears on the slightest occasion. Prostration of the mental faculties kept pace with the physical debility. Imbecility, and sometimes complete idiotism were observed; but in no case the mania or delirium described in many instances of starvation in shipwrecks.

The case of a boy aged fourteen is described, who cut the throats of two other children to get possession of some Indian meal, and who, when subsequently seen by Dr Donovan, appeared like a congenital idiot. His faculties have again brightened since he was committed to jail, and has been supplied with food. [It would be interesting, in a medico-legal point of view, to know whether the boy was tried for this crime.] In the young and infant population the natural instincts seemed to be sharpened by the same causes which paralysed the faculties of the adult—babes scarcely able to speak became expert beggars, and infants a few weeks old would drink greedily from any vessel, and attempt to feed themselves.

Post-mortem appearances.—According to Dr Donovan the post-mortem appearances are in no respect peculiar or characteristic. They are in kind similar to those which may accompany various lingering diseases; and their true cause is to be inferred rather from the absence of any pathological indications of other diseases, than from any characteristic peculiarities. Dr Donovan never met with inflammation or erosion of the stomach, described as common in cases of starvation. He supposes that these may occur in persons in health who have been suddenly deprived of food, and he is induced to ascribe it to the action of the gastric juice.—[We doubt this. Erosion by the gastric juice takes place where food has been taken shortly before death. It is not secreted in fasting animals.]

The appearances witnessed were excessive emaciation, total absorption of the fat on the surface of the body, total disappearance of the omentum, and a peculiarly thin condition of the small intestines, which, in such cases, were so transparent, that if the deceased had swallowed food immediately before death, the contents could be seen through the coats of the bowel. In one case Dr Donovan was able to recognise a piece of raw green cabbage in the duodenum of a man who had died of want. Dr Donovan regards this condition of the intestines as the strongest proof of starvation. The gall-bladder was commonly full. The urinary bladder contracted and empty. The heart pale, soft, and flabby. The brain and lungs normal.

Treatment.—Dr Donovan very properly points out the importance of a cautious

return to the use of food. Too much given at once induces vomiting and exhaustion; a stimulating diet, too long-continued, is apt to produce reaction terminating in fever. He found bread and milk, given frequently in small quantities, to answer best. Rice and soups aggravated the diarrhœa which is the most harassing symptom. It was best combated by opium, decoction of logwood, and chalybeates. — *Dublin Medical Press*, Feb. 2, 1848.

94.—*On the Sifting of Flour, and the Composition of Ration Bread.* By M. HAUSSMANN, of the Commissary Department at Metz.—M. Haussmann, among other matters, calls attention to the effect of using coarse flour for ration bread. The flour for ration bread in France, is ordered by law to have ten per cent. of bran, on an average, removed from it by sifting; five per cent. from hard wheat, and fifteen per cent. from soft wheat. Bran absorbs 1·24 of its own weight of water; consequently, bread containing too large a proportion is not only inferior in appearance and nourishing quality, but from its moisture keeps worse, and is apt to become mouldy. Parmentier, in 1779, pointed out the bad qualities of bran bread for rations. M. Haussmann quotes an experiment which shows the advantage that would follow from using finer flour for ration bread. In a small garrison it was found, that when 620 grammes (about 1lb 5 oz.) of bread, made of flour from which twenty-two per cent. of bran was removed, was substituted for the 750 grammes (1lb 9 oz.) of bread made of flour from which fifteen per cent. was removed, which is the ration allowance, the health of the troops was improved by its use. The expense is the same. For some unexplained reason this successful experiment was stopped.—*Annales de Hygiène publique.* Janvier 1848, *in L'Union Médicale*, 22 Janvier 1848. [This is a subject well worthy of the attention of medical officers, especially in stations where intestinal affections are common.]

95.—*Influence of Tobacco on Health.* By Dr BURETTI of Turin.—Dr B., in a paper published in the transactions of the Medico-Chirurgical Academy of Turin, maintains, that all the statements which have been made respecting the pernicious influence of tobacco on the health, either of those who manufacture or those who use it, are mere fables, and that the bad effects ascribed to the tobacco are due to other causes. He in no respect extends these remarks to the poisonous action of tobacco in larger doses. The observations on which these conclusions are founded, were made in a large manufactory at Turin, which employs 600 work-people, of whom 400 are women and 200 men. The work-people sleep in a part of the establishment. Children are not admitted to the work till from twelve to fourteen years old. Dr Buretti gives a detailed account of the mode of manufacture, from which it appears that the work is much less injurious than was supposed, and that the maladies from which the workers do suffer, depend less upon the nature of the substance with which they work than upon other causes; such as excessive fatigue, sudden alterations of temperature, the action of cold and moisture, and the want of ventilation in the work-rooms. Special attention is directed to the effluvia and gases evolved during the fermentation of the tobacco. M. Mellier has supposed, that the workmen absorb nicotine from the air, and undergo a process of slow poisoning. But that is a mere hypothesis; for all the analyses hitherto made of the atmosphere of tobacco manufactories have failed to detect any nicotine in the air. Nicotine is a formidable poison, and would produce rapid effects if absorbed in this way. On the other hand, the diseases which have been treated in these manufactories, have been generally acute inflammations, accompanied by buffy blood, &c., but not of great intensity. The lean condition and yellow complexion observed in tobacco workers are not peculiar to them, but are met with in other artisans. This tint is not met with so much among those who work with the fermenting tobacco, where, if any where, nicotine would be diffused, but occurs chiefly among those who are exposed to the dust of the leaves when they are spread on the ground for the purpose of moistening them. This powder, being dry, contains no nicotine.—[This statement proceeds on the supposition, by no means established, that nicotine does not exist ready formed in tobacco, but is a product of fermentation.]—The yellow tint observed in those who grind tobacco, is owing to dust adhering to the exposed portions of their bodies, and is removable by washing. The females and children are lean, but this is owing to defective food. Those who can afford to support themselves well, are healthy and fat. Acute rheumatisms are frequent among the tobacco workers; they are cured by repeated bleedings. Phthisis is rare among them. Epidemics of typhus and other disorders, when prevailing around,

have been remarked to be less prevalent among the tobacco workers.

The duration of life among them is as great as in other classes of the population. Some of them live to a good old age. Near the manufactory in Turin, at the confluence of the Dora and Stura with the Po, is a paper factory. The proportion of sick is always greater in the latter, owing, no doubt, to the greater humidity to which the paper-makers are exposed. In the tobacco manufactory there is a department for making sheet lead cases for the packages of tobacco. Colic, spasms, convulsions, and other affections caused by lead, having been observed there; but such symptoms are never seen among the tobacco-workers. Further, Dr Buretti does not think that the use of tobacco, either by smoking, snuffing, or chewing, is in the least degree hurtful.—*Annales de Thérapeutique*. Janvier 1848. [No doubt, as is remarked by the *Annales*, there is exaggeration on both sides in the controversy which has been maintained as to the pernicious or innocuous qualities of the *weed*.]

96. *Delirium Tremens connected with Tobacco Smoking*. By Dr Gordon.—The patient, aged seventy-one, had been smoking tobacco to great excess for a number of years. At length, a short time before he was seized—he resolved to abandon the use of it altogether. The day on which he formed this resolution, he smoked in quick succession nine cigars, which was followed by considerable nausea and giddiness for three days. These symptoms now passed off, and his health for a short time felt better than usual; but after this brief interval, he fell into a lethargic state, from which he was with difficulty aroused. This condition was succeeded by the symptoms of a true delirium tremens. He was wakeful, agitated, talkative, and alarmed at imaginary objects around his bed. His pulse was about 85, full, but soft; countenance dejected, with a wild confused look; skin cold and moist; bowels constipated; tongue moist, and slightly coated. Dr Gordon was not able to report the termination of this singular case, as he left the neighbourhood soon after he saw the patient; but, as having a physiological interest, he mentions two phenomena which were reported to him in connexion with it. 1st, The patient previous to this attack had been hard of hearing, while labouring under it his hearing became excellent. 2d, He had also laboured under some difficulty of speech for a number of years, owing to what seemed a partial paralysis of the tongue. When the derangement of the cerebral system came on, he recovered the use of his tongue, and was able to speak distinctly and rapidly.—*American (Western) Journal of Medicine and Surgery*, quoted in *Lancet*, January 29, 1848.

97.—*Wet Nurses and Lactation*. By Dr Schneider of Fulda.—Dr Schneider inveighs strongly against corsets and other pectoral portions of female dress, as a great means of preventing females from making good nurses. The pressure on the breasts of young women weakens these organs, depresses and hardens the nipples, and obstructs the lactiferous ducts. It is, according to Dr S., a very rare thing to find a perfect nurse. If we cannot be sure of finding an unexceptionable nurse, Dr S. recommends Zwierlein's plan of taking a goat as a substitute. He has himself made upwards of thirty trials with children, whose mothers were unfit to suckle their offspring, and has in all of them obtained successful results by making the children draw the milk directly from the teats of the goat. No animal is so well fitted for this purpose as the goat. We are to select a young tame healthy animal, take care not to feed it too well, especially if the child is strong and plethoric, have it carefully rubbed down and cleaned, and give it frequently salt with its meat. A small wooden platform, to which one or two steps lead, is to be erected close to the wall of the room; it must not be polished, that the animal's feet may not slide. To the wall, or a beam of wood, a leather strap is fastened, which, when the goat has mounted on the stage, can be easily secured round its neck, and to prevent it disturbing the child by moving backwards or forwards, its hind legs are to be secured in like manner. Lastly, at the end of the stage there is to be placed a tin dish with a cover, to catch any discharges from the animal.—*Präger Viertel-jahrschrift*, No. 6, 1847.

98.—*Poisoning with Pepper*. Dr Ritter.—A miller, suffering from diarrhœa, took at mid-day a handful of pepper in a glass of brandy, and as the disease persisted, repeated the dose at night, and ate at the same time two salt herrings. The diarrhœa ceased. In the morning after breakfast, he was seized with severe tormina, especially in the umbilical region, with occasional vomiting of green matters. At mid-day the pain was constant, with occasional aggravations, the belly not distended, and moderately tender on pressure. The pulse strong, full, and slow. Face, eyes, and tongue, highly in-

jected. After a full bleeding, the pulse became soft and free. He got almond emulsion with extract of hyoscyamus, milk for drink, and two enemata of gruel and oil. Next day the countenance was collapsed, the belly very painful and distended, and in the right iliac region a red hard painful swelling as large as a fist; the pulse, small, sharp, and very frequent, and severe pain in making water. He was again bled and leeched, anointed with mercurial ointment and the *oleum coctum hyoscyami*, cataplasms applied, and two grains of calomel given every hour. Next day his condition was worse; the eyes sunk and surrounded by a blue circle; the nose sharp; pulse very frequent and small; the vomiting more urgent, and hiccup for some hours; the tumour softer and less tender; but the inflammation obviously extended upwards to the stomach. At night the extremities were cold; the pulse uncountable; hiccup and vomiting, and severe pain in the belly, which lasted till next morning, when he died. A dissection was not allowed. The inflammation proceeded from below upwards, from the pepper not acting powerfully, till it descended to that part of the canal irritated by the diarrhœa.—*Med. Zeitung vom Vereine für Heilkunde in Preussen*, quoted by *Œsterreichische Wochenschrift*, No. 38.

99.—*Overcrowding of the Metropolitan Grave-yards.* By Mr Walker.—Accurate returns have been made of the superficial extent of the parochial and some other burial-grounds of the metropolis, and of the numbers of bodies annually interred in each. The *annual* average number of burials per acre, for the seven descriptions of burial-places comprised in the intra-mural grounds, is stated by these official returns to be 2271. Now, if we divide this by 7, we have the average for each, which gives 324 burials annually to the acre. From the total, we may fairly abstract the burial-places of the Jews, and those of the Society of Friends, which are well conducted. This will give us five species of grounds, with an annual average of 2130 burials to the acre, or an average of 426 for each. The proper number may be estimated as 136 to the acre; in Germany, the average is only 110 burials per acre per annum. Thus, at the first glance, it is evident that our parish grave-yards are made to receive every year three times as many bodies as they ought, and four times as many as are permitted by the laws of well-regulated continental states. The inevitable crowding of our grave-yards may be illustrated in another way. The annual mortality of the metropolis, at a low computation, is 50,000. Now, supposing the burials to be renewed every ten years (and this is the shortest period that should be allowed for the decomposition of the human body), 444 acres would be required, whereas we have only 209. But this is not all. There are 182 parochial grave-yards in London. Of these ony 48 are confined within the proper limit of 136 burials to the acre; the rest exhibit various degrees of saturation, from 200 up to 3000 per acre *annually*. This is scarcely credible, but official returns confirm the truth of the assertion. In very many the annual average per acre exceeds 1000.

It is humiliating to think that a metropolitan parochial ground, St John's, Clerkenwell, stands at the head of these abominations,—indecent, pestiferous in every respect, because when a proportion of 3073 corpses are annually interred in an acre of land, it follows as an inevitable consequence that the bodies of the deceased can remain in the ground only five months instead of ten years. Hence the stacking of coffins in deep pits, the brutal dismemberment of bodies, the consumption of coffin wood in many localities, the absolute super-saturation of the soil, which can neither retain nor dissolve the putrescent matters with which it is loaded. Hence the daily scenes which outrage every moral and religious sentiment,—hence the danger to mourners from attending funerals in such places,—hence the insidious infection which (more especially in the warm season) poisons the atmosphere; and thus, by undermining health, or begetting disease, hurries thousands to an untimely end, again to become the subjects of fresh indignities, the centres of infection to survivors, the distributors of pestilential emanations, and the centralizers of disease.—*From Mr G. A. Walker's Fourth Lecture on the Metropolitan Grave-Yards.*

[We are happy to say, that much of the nuisance of which Mr Walker complains, has been obviated in Edinburgh, by the formation of several cemeteries in the outskirts of the city, which serve the double purpose of being both useful and ornamental. In a few instances, however, more especially in the West Church and Greyfriars burying-grounds, the evils pointed out by Mr Walker still prevail.]

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

VOL. I. APRIL 1848. No. III.

I.—MEDICAL PHYSICS, CHEMISTRY, AND NATURAL HISTORY.

100.—*On the Identity of certain Vital and Electro-Magnetic Laws.* By Dr JOSEPH BULLAR.—Dr Bullar points out, from Faraday's experiments, that if a spiral galvanic coil be placed on iron filings, they arrange themselves in lines, passing through the centre parallel to its axis, and then folding up on either side as radii round the edge where they meet. Such a spiral coil, through which galvanic force circulates, he considered to represent the disc around the embryo; and the iron filings to represent the direction of the capillary vessels, arranged circularly in a plane, at right angles to the disc, by the magnetic force accompanying the galvanic. From comparing the two he draws the conclusion, that in both cases the force at work obeys the same laws; that the formation of a circular lining disc, by a central force constantly acting, proves the existence of a circular force around that centre, and is analogous to a flat spiral or disc, through which the galvanic force is circulating; and that this vital force in the disc is necessarily attended by a second circulating force in the direction of radii to it, such as is indicated by the vessels. The actual movements of the cells in this lining process are invisible, as it is one of growth; but the *forms* produced are explicable on the hypothesis, that the lining force acts in accordance with the laws of a force the direction and relation of which have been ascertained.

If the galvanic arrangement of the wire be that of a spiral tube or helix, iron filings would arrange themselves in a circular line, going through the helix, round on the outside, returning into itself. The steps in the formation of vessels are, that blood is first formed, and when it circulates a tube is formed round it. The current of blood indicates a force through the axis of the tube; the tube itself indicates a circumferential force around the current, to arrange its materials as a tube. The tubes are arranged circularly, meeting at the heart in the centre, and at the capillaries in the circumference. The lining tube, if it followed electro-magnetic laws, would have (like the helix of wire through which the galvanic force was circulating) a circular force through its axis; and, conversely, this current would tend to form a tube around itself—supposing always proper materials. The vital force has evidently appropriate materials in the form of cells. Those cells, which, exposed to oxygen, become converted into red globules, are moved in a current; thus showing that they are fit matter for the influence of vital force in one direction, and that such a force is moving them; whereas the smaller cells are arranged round the current as a tube, thus showing a second force at work around the first. There is a current in one direction, and a tube around it; neither tube nor current can be explained without the assumption of a moving power; both are readily explained by two circular forces having the same relation to each other as the electro-magnetic. What Goodsir calls centres of nutrition, the author denominates centres of force; and, according to the laws of this force, there would be a common centre, bringing all these isolated and secondary centres into one comprehensive whole. The blood corpuscles are also nucleated centres, each having its own central living force; and thus their relation to the vital force whilst circulating, is analagous to that which a magnet holds to the electro-magnetic force moving it. Both are bodies containing within themselves these forces.

The author shows the application of his views to other facts in physiology—such as, the formation of new bloodvessels; the tubular form of vessels and ducts

among cells; the circulation through capillaries, independently of the contraction of their coats, or of the propulsive power of the heart, &c. &c. The law proposed as the solution of these lining processes is, that, whenever there is a central moving force, there is a power at work around, and to and from that centre, capable of arranging fit matter as tubes, and of circulating fluid to a certain extent through them, and that the tubular formation is owing to a vital power identical in its direction with the galvanic; and the radiated arrangement of these vessels, and the circulation of fluid through them, are dependent on a power accompanying the former, and identical in its direction with the magnetic force. The conclusion was not drawn, that the vital and electro-magnetic forces were the same, but that the direction and relation of both forces were identical.—*Report of the Brit. Association*, 1846.

101.—*Ozon, a probable Atmospheric Cause of certain Diseases.* By M. SCHÖNBEIN.—M. Schönbein has for some years directed attention to a substance which is disengaged from the points of electric conductors, and also from the wires of galvanic batteries. This substance he believes to be identical with that which is formed when phosphorus is in contact with moist air. He has named it *ozon*, on account of its penetrating odour. It is a powerful oxydizing agent, and acts upon silver at ordinary temperatures. It has a power, like that of chlorine and bromine, of irritating the respiratory mucous membrane, and producing catarrh. M. Schönbein thinks that it is constantly liberated in greater or less quantity in the atmosphere, according to the development of electricity. He has ascertained it to be generally most abundantly developed during winter while there is snow, or during stormy weather in summer. From these circumstances, and from its properties in respect to the respiratory functions, M. Schönbein is disposed to attribute to this substance the production of some of those epidemic catarrhs which so evidently depend on atmospheric causes. He has made observations on several epidemics occurring at Basle, and has found their development and decline to present a distinct relation to the quantity of this substance present in the atmosphere.

The means which M. Schönbein employs to test approximatively the amount of ozon in the atmosphere are very simple. He suspends a few sheets of paper, which have been dipped in a solution of starch and iodide of potassium, in the air which is to be tested. In an atmosphere where no ozon is developed, as is the case under a bell-glass, these will remain unchanged for an indefinite length of time; but whenever this substance is present, a blue colour is developed in a moist, and a brown colour in a dry atmosphere. The time required for the coloration varies from a few hours to as many days, being dependent on the quantity of ozon present; in a chamber well secured from drafts, the coloration is very slow; whereas in a free current of air, and in certain states of the weather, it is very rapid. Sulphurous acid and sulphuretted hydrogen gas have the property of destroying ozon; so that in the neighbourhood of public necessaries, and other places where the air contains much of these substances, M. Schönbein finds the papers to retain their colour permanently. It would be interesting to know if workmen, or others who are much exposed to the influence of sulphurous vapours, or mephitic emanations containing sulphur, enjoy any peculiar immunity from epidemic catarrh. — *Gazette Médicale de Paris*, No. 7, 1848, *from Zeitschrift für Rationelle Medizin.*

[As ozon has been little attended to in this country, it may not be out of place to give our readers an account of it in a very few words. It has been long familiar to persons engaged in electrical experiments, that a peculiar smell is given off by the machine in operation, which somewhat resembles, and is identical with that pervading buildings which have been struck by the electric fluid. Schönbein some time since published some experiments, in which he showed that the same smell could be communicated to water by a strong galvanic current, and by a variety of chemical processes, and he supposed it to be caused by the presence in the water of an extremely minute quantity of a new element, to which he gave the name of ozon. In this opinion he was decidedly in error; but his observations have led to more extended experiments by Fisher, Williamson, De la Rive, and Marignac, and the conclusion to be drawn from their researches is, that ozon is in reality oxygen in an allotropic[1] condition different from that in which it usually exists. When in its ordinary condition, oxygen shows no

[1] Allotropism is a term introduced by Berzelius to express the fact, that certain elements are capable of existing in two or more conditions, in which they possess different physical and chemical properties. A familiar example of it is seen when sulphur is melted at a high temperature; it then becomes dark brown and tenacious, and may be drawn out into threads like Indian rubber. It has then passed into a different allotropic condition.

disposition to react on a great variety of substances; but when converted into ozon its affinities are extraordinarily intensified. It then rapidly decomposes iodide of potassium, separates its iodine, and finally, if the action be sustained for a sufficient length of time, converts it into iodic acid, which unites with the potash. It also combines directly with silver, and raises it to the state of *peroxide*, combines rapidly with many other metals, and possesses bleaching powers comparable to those of chlorine. We doubt much whether oxygen in the allotropic condition, which constitutes ozon, is likely to produce the effects which Schönbein attributes to it in the above paper. Its discovery, however, is of the highest importance in theoretical chemistry, and seems even likely to become of practical importance, as it would appear from the experiments of Leuchs that it may be economically substituted for chlorine as a bleaching agent.]

102.—*On a Peculiarity in the Growth of Firs.* By Professor Rossmässler.—Professor A. E. Rossmässler has lately pointed out the curious fact, that firs are subject to a peculiarity in the growth of their wood, which causes them to split obliquely instead of perpendicularly, and that this occurs for instance in Pinus Sylvestris, throughout whole estates, in Bavaria, and it is necessary to raise young plants from foreign healthy seed, since the seeds of these twisted firs inherit the peculiarity of the wood.—*Annals of Natural History.* Feb. 1848.

[The above fact is interesting as an example of hereditary peculiarities of the nutritive process in plants.]

103.—*On Reparation of Injuries in the Planariæ.* By Dr Leidz.—Some experiments which I performed upon *Phagocata*, confirm the statements that the Planariæ are capable of repairing injuries. When an individual is cut in two, both parts after a time become distinct and perfect animals. Division carried to a greater extent in some instances, results in as many perfect animals as there are parts; but generally I have found that, when cut into more than three or four pieces, the intermediate pieces are apt to die, and sometimes the extremities do not survive.—*Dr Leidz in Prac. Acad. Med. Scien. Philadelphia.*

104.—*On the Vertebral Column of the Hydrarchus.* By Müller.—Müller in describing the hydrarchus, a fossil mammal belonging to a peculiar extinct family, and found in the tertiary formation in Alabama, says, "the vertebral column is very peculiar in its structure. The cervical vertebræ, probably more numerous than in any other mammal, are without perforations in their transverse processes; the ribs are only attached to the transverse processes of the vertebræ; at the central and posterior part of the column, the bodies of the vertebræ are unusually long, and must, both at the anterior and posterior part of the extremities, have been cartilaginous, inasmuch as we find here beneath the bony shell a mass of pure stone, while the central part of these vertebræ consist wholly of bone."—*Silliman's Journal for* Nov. 1847.

[The above fact is interesting, as bearing upon some theoretical questions in osteology, especially upon the nature of the cervical ribs, and upon the principles on which the enumeration of the cervical vertebræ should be founded.]

105.—*Occurrence of Blind Insects in the Styrian Caves.* By Mr Spence.—At a recent meeting of the Entomological Society, a letter was read from Mr R. Spence announcing the discovery by Professor Schiodte of as many as twenty species of blind insects of different orders and genera, and all new, in the caves of Styria; so that it would appear that there exists a subterranean fauna of blind animals. Ten of these are coleopterous. It was mentioned that a carabideous genus without eyes has lately been described by the German naturalists, and that various blind insects and spiders have been found in the mammoth caves of Kentucky.—*Annals of Nat. History.* Feb. 1848.

II.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

106.—*New Description of the Sphenopalatine Ganglion.* By M. Gros.—Meckel considers this ganglion to be a swelling of the fifth pair, analogous to the Gasserian ganglion, and similar to those on the posterior roots of the spinal nerves, while, at the same time, he proclaims it to be a type of the sympathetic system. A degree of confusion has thus been introduced, which succeeding anatomists have not completely removed. M. Gros, in a memoir lately read to the Academy of Sciences in Paris,

clearly describes the differences between these two orders of ganglions. He points out that Meckel adhered to a simple appearance, and that his ganglion is united at one point to the naso-palatine radiations of the fifth pair, which are always distinct to the naked eye. Comparative anatomy leaves little doubt on this subject. The error of Meckel and other anatomists originates in their having sacrificed a portion of the organ, the *free portion*, unknown until now, and which M. Gros denominates the orbital, or orbito-cavernous portion. Rising towards the summit of the orbit, internal to the superior maxillary nerve, this portion sends out a crowd of nervous branches, distributed within the orbit and cavernous sinus. Of these, not less than sixty may be counted in the horse, thirty in ruminants, fifteen in man, ten in monkeys, eight in the dog, and four or five in the rodentia. It is this portion which especially communicates to the ganglion its character of individuality and independence. The other portion, which embraces the naso and palatine nervous trunk, or which surmounts it, is the ganglion of Meckel, properly so called, and may be denominated *naso-palatine*. The gray branches which are detached from it, communicate immediately with the white radiations of the fifth pair, or are lost in the nostrils and velum palati. The author then enters into a minute description of the relation of this ganglion to the different nervous plexuses of the region, and points out the errors which Meckel, from his imperfect notion of this structure, was led to entertain with respect to the sympathetic system. But we must refer anatomists interested in this subject to the memoir itself.—*L'Union Médicale*, Mars 11, 1848.

107.—*Experiments on Animal Heat.* By DR DEMARQUAY.—The author has made numerous experiments on animals, with the view of ascertaining the modifications of the animal heat—1*st*, by pain; 2*d*, by loss of blood; 3*d*, by the ligature of certain vessels; 4*th*, by inflammations; 5*th*, by strangulation of the intestines; 6*th*, by the administration of various poisons. He arrives at the following conclusions:—Pain is attended by an increase of temperature: hemorrhage, when rapidly fatal, produces little or no change in this respect.

The ligature of the abdominal aorta causes, in a few hours, a diminution of temperature, of 8° to 10° (18° to 22·5° F.); that of the femoral artery caused, in the thigh, a fall of temperature of only 2°—5° F. As a general result, the ligature of veins causes less diminution of heat than that of arteries.

Every external inflammation is attended by an increase of temperature, both general and local: but the local temperature, in a part far from the centre of the circulation, never equals the internal temperature, *i. e.*, of the rectum. The ligature of the vessels of a part, either before the excitement of an artificial inflammation, or during its presence, does not prevent or modify the increase of temperature in the inflamed part.

Strangulation of an intestine produces a rapid and general fall of temperature. The reduction is greater when a loop of intestine is included in the ligature, than when this is passed circularly round any portion of it. The fall of temperature is also greater in proportion as the ligature is placed near the stomach.

Among poisonous agents—digitalis, belladonna, croton oil, and strychnine, produce a pretty rapid increase of temperature; while a contrary effect is produced by cyanide of potassium, corrosive sublimate, arsenic, tartar emetic, muriate of morphia, and ammonia. The inhalation of ether produces a fall of temperature, which begins with insensibility, and goes on progressively when the inhalation is continued, so as to produce death of the animal.—*Archives Générales de Médecine*, Dec. 1847. *From the Theses of Paris for* 1847.

108.—*On the Channels by which Urea is eliminated after the extirpation of the Kidneys.* By M.M. BERNARD and BARRESWIL.—When the kidneys are extirpated in animals, urea accumulates in the blood: but several days pass over before any appreciable quantity is present. The authors, supposing that during this period the urea must have some other channel of excretion, have analysed the biliary and intestinal secretions at different periods after extirpation of the kidneys in animals. They find that, so long as the animal remains lively, the intestinal, and more especially the gastric, secretions are increased in quantity, and, instead of periodic, become continuous; acquiring at the same time a considerable impregnation of ammoniacal salts. The subsequent diminution of the intestinal secretions, and of their ammoniacal ingredients, is accompanied by the first presence of urea in the blood, and the first symptoms of its poisonous effects. As the salts of ammonia are not normally constituents of the intestinal secretions, it is clear that this is a vicarious elimination of nitrogenous effete matter: and

that the urea is secreted in substance by the intestinal mucous membrane, and afterwards transformed into ammonia, is rendered highly probable by the fact, that chemically these substances are interchangeable, and that urea, when introduced into the stomach of a living dog, is always replaced by ammoniacal salts. *Journal de Pharmacie*, Feb. 1848. *From Archives Générales de Médecine.*

109.—*On the Effects of the Introduction of Common Salt directly into the Stomach.* By M. Bardeleben of Giessen.—On introducing, by a fistulous opening through the abdominal parietes, a small quantity (45 grs.) of domestic salt into the empty stomach of a dog, a series of phenomena was constantly observed, which does not take place when the same quantity is taken by the mouth. Every part of the membrane in contact with the dry salt secretes very rapidly a nearly colourless mucus, varying in quantity. The stomach is then thrown into brisk contraction; the animal is agitated and uneasy, and is seen to swallow large quantities of saliva. The respiration is accelerated, and in four or five minutes vomiting is produced. After the vomiting has ceased, the gastric juice is frequently, though not invariably, alkaline. This alkalinity of the gastric secretion is frequently met with in the empty state of the stomach, or even after the introduction of indigestible substances, such as sponge or pebbles; but during digestion the secretions of the stomach are always acid. The above described action of salt is peculiar to it; for pepper, which is regarded as a much more irritating substance, is very well borne, and increases the gastric secretions without provoking any of those contractions and vomitings described.—*Archives Générales de Médecine*, December 1847.

110.—*Oxalate of Lime a Constituent of the simplest Cellular Plants, and of the Secretion of the Mucous Membranes.* By Dr C. Schmidt of Dorpat.—In yeast, which had been left to itself for three weeks, the author observed the formation of a crop of beautiful crystals of oxalate of lime. By a series of careful experiments, he ascertained that this salt existed ready formed in the yeast cells, and could be extracted from them when perfectly fresh; and he concludes, from various circumstances, that it must be dissolved in the fluid contents of the cell, as a compound of oxalic acid, albumen, and lime (*oxalsaures albuminkalk*).

As regards the elimination of oxalate of lime from the system, the author considers it impossible that, in the oxalic acid diathesis, it can be found in the stomach, experiment having shown that, when the oxalate of lime is swallowed, it is never found in the urine, the oxalic acid being oxidized in its passage through the system, and thrown off by the lungs and kidneys in the form of carbonic acid. He has never in any case found oxalate of lime, either in the saliva or gastric juice, but very frequently in the urinary sediments. Now, oxalate of lime is totally insoluble in fresh urine, and as, from the structure of the secreting portion of the kidney, it is impossible for the urine to carry with it any insoluble matter, he infers that the oxalate must have a different source from the urea and uric acid, &c., of that fluid; and he concludes that it is a secretion of the mucous membrane of the kidney, and even of the bladder itself, from which it is probably thrown off in the form of the soluble compound abovementioned, and precipitated in the insoluble form by contact with the urine. In proof of this position, he points out that morbid increase of the vesical mucus is always attended by an increase in the oxalate of lime. That this salt is also found in the bile, where it is held in solution by the biliary mucus, and is precipitated when that substance undergoes decomposition, but not till then, as the bile does not, like the urine, possess the property of bringing it into the insoluble state. And lastly, which is his strong proof, he has invariably found the oxalate of lime present in the mucous membrane of the uterus during pregnancy.—*Annalen der Chemie und Pharmacie*, vol. lxi.

111.—*Researches on the Bile of the Pig.* By Strecker and Gundelach.—Thenard, long since, pointed out that the bile of the pig is precipitated by acetic acid; and Gorup Besanez, who has recently been occupied with its study, has concluded, from his experiments, that it consists principally of choloidic acid. The authors have, however, ascertained, that its chief constituent is the soda salt of a new acid, to which they have given the name of hyocholeic acid. Pig's bile contains about 88·8 per cent of water, and the solid contents consist of:—

Mucus,.....	5·4
Hyocholeate of soda,.....	74·8
Fatty matters, and cholesterine, with a small quantity of hyocholeate of soda,.....	19.8
	100.0

The aqueous solution of the bile, purified from mucus and fatty matter, is per-

cipitated by chlorides of calcium, barium, and iron; by salts of copper and manganese, acetate of lead, nitrate of silver, and chlorides of tin and mercury; and all of these precipitates are soluble in alcohol.

In order to obtain the hyocholeate of soda in a state of purity, the bile, as it is obtained from the gall-bladder, is mixed with crystallized sulphate of soda, and subjected to a moderate heat, as the sulphate dissolves the hyocholeate of soda, which is insoluble in a saturated solution of that salt, is separated. After washing with a saturated solution of sulphate of soda, it is dried, extracted with absolute alcohol, decolorised by animal charcoal, and precipitated from the solution by means of ether. It is then a white powder, which cannot be made to crystallize, with a bitter and persistent taste. Analysis gives, for its formula, $C_{54}\ H_{38}\ NO_{10} + Na\ O$.

From this salt the acid is obtained by the addition of sulphuric acid, which precipitates it, and it is purified by dissolving in alcohol, and throwing down by means of water. It is a white resinous substance, which fuses in warm water, and presents a silky aspect; after some days' exposure to heat in the water bath, it becomes solid, and then does not melt until the temperature rises above 248°. It is scarcely soluble in water, and quite insoluble in ether; alcohol, however, dissolves it readily, and the solution has an acid reaction. It is easily soluble in ammonia, the caustic alkalies, and their carbonates. When treated with sugar and sulphuric acid, it gives the purple coloration which is also obtained with ox bile. The analysis gives for the acid the formula $C_{54}\ H_{38}\ NO_{10}$. The acid is therefore anhydrous, and does not contain an atom of water in the place of the base in its salts.

The salts of this acid are all amorphous, with the exception of that with ammonia, which is obtained by the addition of a salt of ammonia to the hyocholeate of soda. It deposits, in the form of a silky powder, composed of microscopic needles, readily soluble in water, but insoluble in solutions of ammoniacal salts. Its aqueous solution is partially decomposed by boiling.

Hyocholeic acid is possessed of much greater stability than the constituents of ox bile, and may be boiled for a long time with caustic potass without undergoing decomposition; it is only when the alkali becomes nearly monohydrated, that it is decomposed with the evolution of ammonia. Treated with nitric acid, it gives the same products as cholesterine and choleidic acid.

The bile of the pig differs from that of every animal hitherto examined, in the total absence of sulphur, and consequently of taurine, which is so important a constituent of ox bile.—*Annales de Chimie et de Physique*, Jan. 1848.

III.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

112.—ROKITANSKY *on the Morbid Appearances of Fat.*—Rokitansky arranges the morbid appearance of fat in twelve subdivisions:—

1. The occurrence of fat in the fibrinous clots of blood found in the veins, a consequence of a diseased condition of the serum of the blood, arising either spontaneously, or from infection with inflammatory products.

2. The fatty metamorphosis of the coagula similarly developed in the capillary system—what is termed deposition or metastasis.

3. The occurrence of fat in fibrinous and albuminous inflammatory products; as, for instance, in exudations, and especially in pus. This may be best observed in the exudations occurring on serous membranes.

4. The fat occurring in the albuminous and fibrino-albuminous products, formed in the kidneys in Bright's disease. The spots at which the actual process of fatty transformation are proceeding, are generally perceptible to the naked eye as faintly white, fatty, shining, and generally rather turgescent points.

5. The occurrence of fat in lardaceous infiltration of the liver. The lardaceous blastema appears at points to be opaque, and of a faint white, or whitish-yellow tint.

6. The occurrence of fat in tubercle, during its incipient softening, as well as in the surrounding masses of crude fibrin as they also soften.

7. The occurrence of fat in colloid substance, which is especially observable in colloid of the thyroid gland. In the more consistent forms of colloid it may be remarked by the naked eye, as forming opaque, pale white, or whitish-yellow spots.

8. The occurrence of fat in cancer, where it forms emulsive compounds with albumen, and soapy, glutinous compounds with bases—the saponifying process of cancer. The points from which the process commences, are very frequently the yellow

fibrinous masses, which either penetrate the mass in the form of a reticulum, or constitute enveloping accumulations.

9. The occurrence of fat in what is commonly designated the atheromatous process, in the depositions on the inner surface of arteries, and in the soft groundwork of the concretions sometimes found in veins.

10. The fatty conversion of the fibrous blastema and tissue in fibrous tumours and fibrous exudations.

11. The fatty degeneration of the circular fibrous coat of the arteries, partly pure, and partly combined with, and dependent on, the deposition and its metamorphoses—atheroma and ossification.

12. The occurrence of fat in the muscles of animal life, for instance in the heart, manifesting itself by an apparent conversion of the muscular fibrillæ into molecular fat, and accompanied by the disappearance of the transverse strie, and by the swelling of the sheaths.

Whether milky-looking blood, so far as this appearance depends on fat, and whether the secretion of fat from the intestinal canal, should find a place in this class, are points which cannot be decided without more accurate observation and investigation.

The metamorphosis into fat affects (as must be understood from the remarks we have already made) crude fluid and solid blastemata, such as are in various stages of development into tissue, and tissues that are perfectly formed.....It must be regarded as a favourable event, since it reduces many kinds of tissue to a condition in which they can be more readily resorbed and reassimilated; further, it is the basis of the processes of involution, destruction, and death of the structure in question.

In regard to the last property, it is very frequently combined with the so-called processes of ossification and cretefaction occurring in blastemata and tissues—processes which present a striking analogy.

The fats occurring as the consequence of these metamorphoses may present many differences. In most cases, we find fluid fat in a finely-divided molecular condition, or in drops, which are sometimes comparatively large, clear, and strongly refracting, and sometimes more opaque, yellow, and glutinous. Cholesterin is very frequently found in a crystalline state in exudations, tubercle, colloid, cancer, and especially in atheroma of the arteries.—*Handbuch der Pathologischen Anatomie, and Brit. & For. Med. Chir. Review*, (Pp. 287-90.)—January 1848.

113.—*On Certain Pathological Conditions of the Blood and Urine in Gout, Rheumatism, and Bright's Disease.* By Alfred B. Garrod, M.D.—The object of the author's researches is to prove that—

1st—In gout the blood always contains uric acid, and that this body can be crystallized from that fluid in the form of urate of soda.

2d—That the uric acid is diminished or absent in the urine immediately preceding the gouty paroxysm.

3d—That in patients subject to chronic gout with tophaceous deposits, the uric acid is always present in the blood, and deficient in the urine, both absolutely and relatively to the other organic matters, and that the chalk-like deposits appear to depend on an action in and around the joints, &c., vicarious to the "uric acid secreting function" of the kidneys.

4th—That the blood in gout sometimes yields a small amount of urea, (no albumen being present in the urine).

The author next spoke of some experiments made on the blood of the sheep, and of birds. Sheep's blood was not found to contain uric acid, and even from the blood of the pigeon, whose urine consists almost entirely of that substance, none could be obtained. Human blood, from patients in tolerable health, was always found to yield a trace of uric acid, but a quantity exceedingly minute, compared with the amount in gouty blood.

The author further ascertained, that in acute rheumatism the blood contained no greater amount of uric acid than in health, and that no urea can be extracted from it. In Bright's disease the urea was much increased in quantity in the blood; the uric acid being sometimes increased, and sometimes not. He is led, from his researches, to consider uric acid as formed naturally in the blood, and merely secreted by the kidneys; instead of being a product of the urinary secretion, as has been often supposed.—*Medical and Chirurgical Soc. of London, from the Lancet*, Feb. 26, 1848.

114.—*On the Variations in the Amount of Phosphatic Salts in the Urine in Health and Disease.* By Dr Bence Jones.—"Mulder has shown, that in inflammation, one of the albuminoid constituents of the blood passes into a higher state of oxidation than that in which it usually exists. Oxides of protein, as he has called them, form the inflammatory crust. Indeed, the whole of the fibrin of the blood is changed into these substances. This alone would give us some reason for expecting, that in inflammations of particu-

lar organs, the constituents of these organs would be affected in a similar way. For example, that in inflammations of the brain, we should find the phosphorus of the phosphorized fats oxidized, forming phosphoric acid.

"Now, after a long-continued experiment, which I have been enabled to make on the appearance of phosphatic salts in the urine, the result of nearly a hundred cases of disease, and of many hundred quantitative analyses, has been, that acute affections of the nervous substance, organic and functional, are the only diseases in which an excess of phosphatic salts can be proved to exist in the urine. By phosphatic salts, I do not mean the earthy phosphates alone, but the alkaline phosphates, as well as the earthy ones. I obtained and weighed not only the earthy phosphates, but the earthy and alkaline phosphates together—thus determining the total phosphatic salts present in the water. If it could be obtained, the water first passed in the morning was used for analysis; for I found it impossible to obtain, with any approach to accuracy, the whole quantity passed in the twenty-four hours. Had this been possible, it is probable that chronic diseases would have furnished me with positive results.

"It was necessary, before beginning my experiments on disease, to trace the variations and their causes in the state of health.

"1. I found that the earthy phosphates varied soon after food from 1·91 per 1000 parts of urine, specific gravity, 1033·2, to ·97 per 1000 urine, specific gravity, 1027·3.

"Long after food, they varied from ·75 per 1000 urine, specific gravity, 1028·0, to ·20 per 1000 urine, specific gravity, 1028·2.

"The alkaline phosphates, long after food, and soon after exercise, vary from 8·10 per 1000 urine, specific gravity, 1028·0, to 6·50 per 1000 urine, specific gravity, 1022·8. Soon after food, the quantity varied from 6·67 per 1000 urine, specific gravity, 1025·5, to 4·72 per 1000 urine, specific gravity, 1033·2.

"Sulphate of magnesia, chloride of calcium, or lime water, taken into the stomach, increased the earthy phosphates at the expense of the alkaline phosphates. After sulphate of magnesia had been taken as medicine, the earthy phosphates were found to increase as high as 2·99 per 1000 urine, specific gravity, 1027.6; and in a second case, up to 2·93 per 1000 urine, specific gravity, 1026·2. The amount of alkaline phosphates was found by experiment to be chiefly influenced by the diet, and to a less extent by exercise. —*Philosophical Transactions*, 1845. I then passed on to the amount of phosphates in disease. I found the variations in the earthy phosphates to be almost independent of the nature of the disease.

"2. In fractures of the spinal column, and in paraplegia, the total amount of the phosphatic salts was slightly above the healthy standard at the early period. When chronic, the total quantity of phosphatic salts was lower than natural.

"3. In some acute diseases, as acute inflammations and fevers, showed no increase.

"4. In some chronic diseases, as Bright's disease, dropsies, scrofulous diseases, exostosis, there was no increase. One case of mollities ossium presented a marked exception.

"5. In chronic diseases of the brain, and in chronic or even acute diseases of the membranes, there was no increase of phosphates.

"6. In fractures of the bones of the skull, when any inflammation of the brain supervened, there was an increase in the total amount of phosphatic salts. When there were no head symptoms, no increase of phosphates was observed, even though other acute inflammations supervened.

"7. In the general paralysis of the insane, no increase of phosphates was observed. Other insane patients presented nothing very remarkable.

"8. In acute inflammations of the brain, there was an excessive amount of phosphates secreted. When the acute inflammation being chronic, no excess was observable.

"9. In some functional diseases of the brain, an excessive amount of phosphates was secreted; this ceased with the delirium. In other cases of delirium, the phosphates were found to be greatly diminished."—*Lancet*, July 29, 1847.

115.—*Emphysema of the Lungs.*—Rokitansky considers the dilatation of the air-cells in emphysema to be produced by too deep and vehement inspirations. Hamernjk, on the other hand, ascribes this dilatation to the expiratory act when this is sudden and forcible. He supposes that the area of the bronchi, and their ramifications, may be represented by a cone, whose apex or smaller extremity corresponds to the large bronchi at the root of the lung; and that hence the column of air in forcible expiration is retained in passing the larger bronchi, and pressure is exerted backwards towards the air vesicles, which thus become abnormally distended and relaxed. This will

be the more apt to occur when the bronchi are clogged by mucus. According to Hamernjk the inspiratory act can never produce emphysema, because the ingress of air into the vesicles is regulated by the expansion of the walls of the chest, and not by pressure acting within the air passages so as forcibly to distend the air-cells.—*Hannoverische Annalen*, 1847.

IV.—PRACTICE OF MEDICINE.

116.—Hebra *on Skin Diseases.*—(*Continued from* p. 35.)

c. Purulent exudations.

Hebra calls them all *impetigines*, and includes those which have an acute course. The pustules are the characteristic symptom, and the three varieties of pustules, form here the principle of division.

1. *Impetigo achor.*—Small pustules seated in the follicles, accompanied or not by an inflammation of the skin, acute or chronic; at first they are level with the skin and perforated by a hair, afterwards the epidermis is burst through, and the pus mixed with sebum dries as a honeylike yellow crust; this is thrown off, and the epidermis becomes regenerated. It is distinguished from eczema by no infiltration being perceptible after the loosening of the crusts. It is localized on the hairy scalp, forming the *Tinea mucosa, Porrigo favosa mucifiua* of authors, and may either occupy the entire scalp (*achor mucosus*), or exist in isolated groups (*achor granulatus*). It is distinguished from *Favus* by the favous efflorescence being seated not on, but in the skin. On the face, when it affects the hairy parts, it has been called *Tinea barbæ, crusta lactea, Mentagra.* It arises from the same causes as *Eczema*; the prognosis is, however, more favourable, and the treatment simpler; it is often sufficient merely to remove the crusts, or the cold douche may be applied, or an ointment of sulphuretum iodi, ʒ ss—ʒ j to the ounce of lard, or an ointment of zinc.

2. *Impetigo psydracion.*—The pustules, product of an inflammation and ulceration of the follicles, or of a purulent metastasis to the skin, are round or irregular as one or more follicles are engaged. The pus dries to greenish scabs; the green colour is not, however, diagnostic, as the crusts of *I. achor* of long standing, and treated by fomentations, acquire a greenish hue, and those of all the three varieties may have a brown colour from admixture of blood by scratching. Various subdivisions have been made from the arrangement of the pustules, as *sparsa, confluens*, &c. The *I. erysipelatosa s. faciei rubra*, begins with a slight erysipelatous redness without swelling, which disappears on the formation of the pustules; a more chronic form going under the same name, consists in each pustule being surrounded by a red halo, these halos coalescing as the pustules increase in number. Both frequently follow other skin diseases, or are formed metastatically through the pyæmia in phlebitis, as occurs in puerperal or glandered patients.

In these latter cases, the treatment can only be general; in ordinary cases, the same treatment as for *I. achor* suffices.

3. *Impetigo phlyzacion*, called generally *Ecthyma.* Almost exclusively confined to the extremities, forming large round pustules surrounded by a halo, which change to dark brown crusts, beginning at the centre; they are almost always isolated, and may be seen in different stages at different places. It may be confounded with *Rupia*, but this begins with a vesicle, has always larger crusts, and is usually equally advanced at all places, occurring likewise over the whole body. It may become developed after the external use of tartar emetic, usually, however, occurs in decrepid and badly nourished individuals. In the higher ranks it is extremely rare; good nourishment, baths, and fomentations, have in most instances proved successful.

Hemorrhagies form the 5th Class.

Here also has Hebra endeavoured to simplify the hitherto complicated nomenclature. Every escape of blood into the substance of the skin, although caused by laceration or bruise, he calls *Purpura.* Hence the redness is not always visibly altered by the pressure of the finger; the efflorescence accompanying these effusions may be macular, papular, bullar, or vesicular. If the hemorrhagic spots resemble flea-bites, they are called *petechiæ*, if they be striped, *vibices*, if they extend over large surfaces, *ecchymoses.*

Idiopathic Hemorrhagies are—

1. *Purpura traumatica.*

2. *Purpura febrilis simplex.*—A form of cuticular apoplexy which occurs in plethoric individuals, particularly drunkards.

3. *Purpura senilis.* The same disease in old people.

Symptomatic are—

1. *Purpura febrilis.*—Appears to arise

from a sudden alteration of the blood, particularly great defibrination. After considerable fever, lasting twenty-four hours, ecchymoses appear in the region of the stomach, afterwards on the superior and inferior extremities, and in the course of three or four days, if death have not earlier occurred, the entire body is covered with them; after some time a disagreeable stench is developed in the atmosphere surrounding the patient. Hemorrhagies into all the organs are found on dissection.

This form arises most commonly after bites from poisonous snakes.

2. *Purpura hæmorrhagica seu morbus maculosus Werlhofii.*—This disease arises suddenly, but without fever, and hemorrhage from some opening is the first symptom, almost simultaneous with this ecchymoses appear on the skin; after fourteen days or three weeks, the bleeding and disease stop without the occurrence of fever, and without any treatment.

3. *Purpura rheumatica, seu Roseola rheumatica, seu Peliosis rheumatica*, after a few days pain in the joints, particularly the knee, round red stains, papulæ, and ecchymoses occur in its neighbourhood, and extend along the extremities only; they become yellow in a few days from absorption, and in a few weeks the disease departs likewise without treatment.

4. *Purpura scorbutica.*—Here the hæmorrhage is only one symptom of the disease; the rest are well known. Its appearance through the skin causes the peculiar yellow cachectic appearance of the patients. Alteration of their mode of living is more productive of cure than the employment of acids.

5. and 6.—*Purpura typhosa* and *exanthematica.*—(*To be continued.*)

117.—*On Albuminuria independent of Renal Disease.* By Dr FINGER of Prague. —Among about 600 medical cases of various kinds in the general hospital at Prague, the urine was found to contain albumen in 155. Among these were—

	186 Cases.		Albuminuria in,
Tuberculosis,	46	...	46
Typhus,	88	...	29
Puerperal Fever	46	...	32
Carcinoma,	14	...	6
Chlorosis,	6	...	2
Acute Rheumatism,	18	...	0
Ague,	10	...	1
Pneumonia,	33	...	15
Pleurisy,	14	...	2
Peritonitis,	6	...	2
Chronic Catarrh,	16	...	3
Diarrhœa,	65	...	8
Disease of Heart	18	...	7
Epilepsy,	2	...	2

The remaining cases were 3 of chorea, 6 of paralysis, 2 of tetanus, and 3 of hysteria; in these no albumen was found.

Of the 46 cases of tuberculosis with albuminous urine, 35 died; in 19 of these there had been œdema of the lower extremities, leading to a suspicion of granular disease of the kidney, which was nevertheless found to exist in 2 cases only.

Of the 29 cases of typhus, 17 died; disease of the intestinal glands was present in all, combined in 2 cases with pneumonia; the kidneys were sound in all the cases. The albumen appeared in the urine generally from the 16th to the 25th day, while the disease was on the increase or at the height; in those which recovered, it uniformly declined and disappeared during the convalescence.

The large proportion of cases in which puerperal fever was accompanied by albuminous urine, is explained by the admixture of the urinary and lochial discharges; in 6 cases, however, which were fatal from peritonitis, and in which the kidneys were sound, the albumen continued to present itself in the urine after the disappearance of the lochia.

In 4 of the 6 cases of cancer, the albumen was evidently from the admixture of uterine discharges. The kidneys were sound in all.

In 9 of the cases of pneumonia, the albumen disappeared from the urine during convalescence. In 6 which died, the kidneys appeared sound.

Dr Finger is disposed to conclude, that in cases like the greater part of the above, where albumen appears in the urine along with a fibrinous or purulent exudation into some organ of the body, it is in consequence of these exudations being re-absorbed into the blood, and evacuated as effete matter by the kidneys. In support of this view, he gives three cases where albumen appeared in the urine simultaneously with the formation of abscesses in different parts of the body; and in two of which it was observed to disappear rapidly on the abscess being opened and the pus evacuated.

Dr Finger speaks strongly of the necessity of caution in the diagnosis of diseased kidneys from the presence of albuminous urine, where the evidence derived from the history of the patient is from any cause not conclusive. He narrates two very interesting cases of patients admitted to the hospital, with all the usual symptoms of cerebral disorder from retained urea, in whom there was also a large quantity of albumen in the urine; and which, nevertheless, after death presented no appearance of granular kidney. In

one there was slight puerperal peritonitis, and inflammation of the brain and its membranes, with two abscesses in the right hemisphere; in the other there was inflammation and purulent deposition in the urinary passages, with obstruction of one ureter and impediment to the function of the corresponding kidney, which was very much distended. In both these cases the diagnosis of Bright's disease, which was the one arrived at, was unavoidable, from the absence of any history of the patients' illness, and the state of insensibility on admission.

In the two cases of epilepsy in which albuminuria was discovered, the albumen presented itself only after a convulsion, diminishing, and gradually disappearing, after the lapse of thirty-six hours. This observation is important in connexion with the cases recorded by Lever and others, of the concurrence of albuminuria with puerperal convulsions.—*Prüger Vierteljahrschrift.* 1847. No. IV.

[We consider Dr Finger's observations as an important contribution to the pathology of albuminuria; at the same time, we cannot view his results as by any means clearly or definitely established. We are sure that no modern pathologist who has given any attention to the minute examination of the kidney, would be content to assume the soundness of that organ from the absence of the ordinary appearances of granular disease. Moreover, if Dr Finger's explanation of the albuminuria occurring during acute diseases be correct, how comes it that the albumen is present in the urine during the *inflammation*, when the fibrinous exudation is at the same moment thrown out elsewhere; and absent during the *resolution*, at the very time when that exudation is reabsorbed into the current of the circulation. Further, we know, from the observations of Schönlein and others, that the effete fibrine of inflammatory exudation is generally converted, in passing off by the kidneys, into lithate of ammonia, which is deposited as a sediment soluble by heat; and, if this be established as the usual process, surely the secretion of unaltered albuminous matter by the kidneys, must be the result of some disturbance of their function. On the whole, we think it most probable, from the evidence before us, that the secretion of albumen by the kidneys, is generally the result either of functional alteration or of organic disease of the organ itself; and the researches of Dr Finger are valuable and important, as tending to show the circumstances under which this must readily occur as a temporary exudation, thereby presenting hints for present use in a diagnostic, and for future inquiry in a pathological, point of view.]

118.—*Cholera Infantilis—Clinical Lectures* by Professor Trousseau.—The cholera of children is one of the most frequent, and perhaps the least known, of the maladies of infancy. It attacks them when they are improperly weaned. The new food which is offered to the stomach disagrees with it, and produces a diarrhœa at first of a mild, but afterwards of an incurable nature. After lasting some time without occasioning any great change in the general condition of the little patient, this disturbance of the digestive functions suddenly brings on a striking and frightful alteration. In the space of a few hours the eyes are sunk and surrounded with a bluish margin; the face and extremities are as cold as marble; the temperature of the mouth and tongue is also lowered much beneath the standard of health; the skin loses its elasticity, and pits on pressure: if, for instance, the skin of the abdomen be seized between two fingers, the fold thus produced does not disappear when the hand is removed. Respiration is deep and slow; vomiting incessant; the diarrhœa, at first lienteric —*i. e.*, consisting of the passage with the fæces of recognisable nutriment—is soon constituted, when all the food contained in the bowels has been thus evacuated, by a greenish fluid, and sometimes of so light a colour as to be mistaken for urine: this secretion, as in the cholera of the adult, is suppressed. Cramps are observed in the child; they are attested by the cry, coupled with rigidity of the extremities, the cry not being followed by alvine evacuations. The disease may last from a few hours to two days, great danger seldom being prolonged beyond the third day. With regard to treatment, we should recollect that vomiting and diarrhœa do not constitute the essence of cholera, but only two of its features: we should seek that essence in the nervous disturbance, which from the beginning seems to impede, or at least greatly to interfere with, the action of the heart and the circulation of the blood. In children the vomiting and diarrhœa can even be arrested without very great difficulty by the exhibition of astringents and opium; but this arrest almost invariably proves fatal within a short time. We recommend during the first period the application of stimulants to the surface of the body; for this purpose the child may be plunged in a bath heated to 28° R. (95° F.), some mustard flour having previously been

placed in the water. The child should be held in the bath for some ten minutes, and this application repeated twice or even three times in the course of the day. The most advantageous internal exhibition is ipecacuanha. In order to facilitate the reaction we also employ a stimulant mixture of the following nature:—R. Aq. menth. pip., ʒj.; syrupi ætheris, and syr. corticis aurant., aa. ʒij. Sumat. coehl. j. amplum q. horâ. When the reaction is fully established, these measures should be suspended and antiphlogistic remedies put in requisition.—*Med. Times*, Jan. 29, 1848.

119.—*Differential Diagnosis of Pneumonia and Pleuritis.*—The following points chiefly deserve attention. 1. The resonance of the voice is clearly perceived in pneumonic, but never in pleuritic exudations; chiefly in the former when the voice is neither high nor feeble. 2. In pleuritic exudations, percussion can distinctly limit the healthy and diseased regions, whereas, in pneumonic, the dulness on percussion vanishes only by degrees. 3. On account of some cells still retaining air, even amidst the infiltrated lung, the tone of percussion is not so perfectly dull in pneumonic exudations as in pleuritic; for the same reason the resistence of the chest is less in the former. 4. Whenever the dull tone is perceived only at the angle of the scapula, and not likewise on the anterior surface of the chest, the exudation is necessarily of pneumonic origin. 5. Enlargement of the thoracic walls never occurs, as a consequence of pneumonic exudation; on the contrary, as a consequence of pleuritic exudation, it constantly occurs in children, and very frequently in adults. Pleuritic exudation, when on the left side, may be easily mistaken for an enlarged spleen; but in such cases, it should be borne in mind that the surface of the pleuritic exudation has a tendency to cross the ribs; whereas the tumour of the spleen invariably extends in the direction of the ribs. —*Clinical Notes taken in the Hospital of Prague. Hannoverische Annalen*, 1847.

120.—*Treatment of Pneumonia.*—Ordinarily the physicians of the hospital abstain from blood-letting, as well as from the employment of tartar emetic. Some of them, however, are now resorting to the use of the first, in those cases in which the disease is still in the stage of mere congestion, and where as yet no exudation has occurred. It is likewise employed where the dyspnœa, the pain, and the frequency of pulse, have reached their height. Hamernjk alone employs blood-letting in the last stages, and apparently without any disadvantage. Blistering is almost never adopted. Comparing the numeric results of this expectant treatment with the more energetic ones, they appear similar, with this exception, that in the former the convalescence is much more rapid.—*Ibid.*

121.—*Diagnostic Observations on Diseases of the Heart.*—In a case of enormous dilatation of the right ventricle, Jaksch was misled by the presence of increased dull percussion and diminished impulse, so as to pronounce the case one of pericardial effusion. He observes, that in guarding against similar errors useful information might be derived from the jugular veins, which are generally distended in dilatation of the right side of the heart. According to Hamernjk, the cause of the reduplication of the heart's beat is want of correspondence in the time of the systole of the two sides. The occurrence of abnormal sounds of the heart is by no means peculiar to organic diseases of that organ, being also found at the beginning of typhus, pneumonia, scarlet fever, &c., as well as in anæmia. In this last case Oppolzer ascribes the murmur to alterations in the quality, rather than the quantity, of the blood; as he observes that, after considerable losses of blood, the murmur does not occur until some time has elapsed, during which, the lost bulk has been replaced by the addition of water.—*Ibid.*

V.—PRACTICE OF SURGERY.

122.—*On the Operation of Gastrostomy (formation of an artificial opening into the stomach, from γαστηρ; στομα), as applicable to cases of obstructed Œsophagus.* By Professor SEDILLOT of Strasburg.—The operation here proposed, consists in incising the abdominal parietes opposite the anterior wall of the stomach, making an opening into the latter, and connecting the edges of this opening with the external wound, so as to form an artificial fistula, by which sustenance may be administered in cases where irremediable obstruction of the natural passage exists. Such cases, if left alone, are quite desperate, their only possible termination being death by fa-

mine; and Sédillot, therefore, holds that it is justifiable to interfere by any means which offers a chance of safety. That the operation which he proposes is not impracticable, is proved by various cases (such as that of the celebrated Alexis St Martin) in which a stomacal fistula occurred, as a consequence of accidental wounds; and also by the experiments of Blondlot on animals, in one of which he kept a dog in health two years, nourishing him by means of an artificial fistula of the kind described. Experiments of this description have also been performed by Sédillot himself, with a successful result. With these facts before him he argues, that although gastrostomy ought not to be proposed where there is a probability of life being continued for some time without interference, yet in those in which death is evidently imminent, and where there is no other resource, the surgeon ought not to hesitate about giving his patient the chance of a prolonged existence, and freedom from suffering.

If this be admitted, it is evidently of great importance to keep in view those circumstances under which obstruction of the œsophagus might render such an operation necessary. The author, therefore, enters in an elaborate review of all those lesions of the œsophagus which lead to permanent constriction of the natural passage. He gathers from pathological writers a great variety of cases, which he arranges under fifteen heads, viz.:—

1. Congenital absence of part of the œsophagus.
2. Stricture in consequence of tumours in the neighbourhood of the œsophagus.
3. Tumours formed between the tunics.
4. Hernia of the mucous membrane.
5. Polypi.
6. Stricture, by atrophy of the tube, without appreciable lesion of its walls.
7. Atresia, from cicatrices, with loss of substance.
8. Fibrous stricture.
9. Fibrous degeneration of the muscular coat.
10. Cartilaginous stricture.
11. Osseous transformation.
12. Complete obliteration.
13. Cancerous stricture.
14. Impermeable stricture of the cardia.
15. Fatal œsophageal stricture without known cause.

The cases to which the operation is applicable, as above enumerated, appear to be referrible to two divisions; the first being those cases in which the operation is performed without hope of modifying thereby the original diseased condition, and merely to prevent death by hunger; the second, comprising cases in which the original condition is susceptible of modification, and where the establishment of a new passage to the stomach either assists the cure, or prevents the further progress of the disease. In this respect, the proposed operation has a close analogy in its mode of application with the more familiar one of tracheotomy.

The principal cases to which gastrostomy is applicable, according to Sédillot, with the double purpose above mentioned, are those comprised in the 4th, 7th, and 13th sections of his arrangement. In the 4th series, in which the mucous membrane is thrust through the other tunics, so as to form diverticula, he holds that the constant passage of the food distending these abnormal pouches is certain to keep up the morbid lesion, and, even by dilating the pouches still farther, to hasten the ultimate obliteration of the normal passage; whereas, if the operation of gastrostomy be performed, there is a probability that the pouch may, in time, contract and obliterate itself. In the 7th series, comprising all the wounds and inflammatory lesions of the œsophagus, in which there is hope that the judicious employment of catheterism might ultimately restore the tube to its function, Sédillot holds that gastrostomy will often permit us to continue this treatment when otherwise the death of the patient by inanition would have frustrated our efforts; and he believes that, in such cases, the chances of cure will often be greatly increased by the complete rest which is obtained in the intervals of treatment for the diseased portion. Finally, in the truly cancerous lesions, where the diagnosis can be ascertained with any degree of certainty, he conceives repose of the part to be of the first consequence, as both catheterism and the passage of food through the cancerous part, tend very much to the rapid progress and fatal issue of the disease; and he thinks, therefore, that gastrostomy may possibly be found to be applicable to cancerous cases at an earlier period than that at which death by inanition is imminent.

It is necessary to state, that the operation has never yet been performed by Sédillot, although he so strongly advocates its performance.—*Gazette Médicale de Paris*, Nos. 1, 3, 5; January 1847.

123.—*On the Treatment of Strictures of the Œsophagus by Catheterism and Cauterization.* By M. Gendron of Chateau-du-Loire.—The author is of opinion that many strictures of the œsophagus, which

at first appear incurable, will be found to yield to careful and protracted treatment by the œsophagus-bougie, with occasional use of cauterization. He objects to the treatment proposed by Sédillot (see last article) as being unpractical and hazardous. The use of the bougie, on the contrary, is in no way dangerous if due care be taken; and the objections of the patient to it are of short duration, as the œsophagus becomes very soon accustomed to the stimulus of the instrument. So long as there is any obstruction, it is necessary to support and guide the bougie in its passage downwards, by means of two fingers of the left hand introduced into the pharynx. Dilatation occurs very gradually, and sometimes there appears to be a re-contraction, rendering it necessary to return to a smaller size of instrument after some progress has been made. The completeness of the cure is to be judged of chiefly according to two circumstances:—*First*, the ease with which a full-sized bougie can be passed, *using one hand only; second*, the disappearance of the tracheal rale, and unnatural quality of the voice, which almost invariably accompany an œsophageal stricture.

M. Gendron alludes to four cases in which he has succeeded in curing tight strictures of the œsophagus by the method here spoken of. Three of these were in consequence of diphtherite; one was without known exciting cause; one was not more than eighteen days under treatment; the rest from one to two months. Cauterization, by nitrate of silver, was employed in three of the cases; in two repeatedly; in the other, only twice. The elastic bougie, or the whale-bone staff with sponge, was used at short intervals; often several times in each day, but not so frequently after cauterization.—*Gazette Médicale de Paris*, No. 11, 1847.

124.—*On the Treatment of Dislocation of the Patella on its Edge.* By Mr VINCENT. —"When the patella rests in its trochlea, but is turned on its edge, the inner edge is applied to the femur, the outer, of course, standing out at right angles to it; the upper surface faces the other knee, and the articular surface looks outwards. It might, on first consideration, be supposed that a replacement could be readily effected; but, practically, it is a very formidable undertaking, if the surgeon has not entered into those views I now offer to the profession, in connexion with the association under which muscles act. Some years ago, I was called suddenly by a surgeon to assist in reducing a dislocation of this sort; for effecting which, the medical man had resorted to all the various expedients he could contrive for effecting the purpose. I found the patient to be a gentleman who some years before had, in the common way, dislocated the patella whilst shooting; and that he had subsequently had the same accident often occur; but now it had become the dislocation of the above kind. The surgeon had exhausted his ingenuity: however, we resumed the series of contrivances with all the powers we could exert of lateral pressure on the bone in all directions, but nothing availed; and it seemed to me as firmly fixed in position as if three or four long screws had been driven through its thickness, and bound it most closely to the femur. All this time we were acting in the falsely received notion of relaxing muscles by merely keeping their attachments as much as possible approximated to each other, and the leg was most carefully kept extended on the thigh."

"After a long course of trials in this way, it occurred to me, that I might effect some change by giving the bones a sort of shake; for this purpose, I slightly bent the leg, and gave a little rotatory motion to the tibia, when the patella quietly returned to its proper situation, as if a charm had released it from its fixed state. The hand of an infant might now have deposited it in its trochlea. The result of the manipulation in this case, led to reflections which opened to my view principles very different from those I had formerly held. It offered a forcible example, that any muscle disturbed in its arrangement, is under great excitement to act. The disturbed arrangement here was the elevation of the centre of action of the extensors above the ordinary position; and as these muscles, in the straight position of the whole limb, are called upon to support a great proportion of the weight of the body, so when in that position they are naturally impelled to exert a vast force. But in obedience to the associated action of combined muscles, when the leg is bent, and another order of motions in this complicated joint is brought into play, then these extensor muscles immediately relax; they would otherwise, by their action, prevent the rotatory motion of the leg upon its axis. Thus the moment the leg was bent, the extensors returned into a comparative state of repose, and left the patella quietly to resume its appointed position. Not very long after the occurrence of the above case, I was called one night to the hospital to a similar one. The house-surgeon had adopted all the means of ingenuity and of force, but had not succeeded in reducing it. I bent the leg,

and, rotating it in the axis of the tibia, the patella quietly returned, and thus was accomplished the reduction."—*Observations on some parts of Surgical Practice.*

125.—*Contributions to Aural Surgery.* By Mr WILDE of Dublin.—In the operation of perforating the membrana tympani, Mr Wilde objects to instruments in the form of punches or trocars for the purpose of removing a circular portion of the membrane, because, from their size, they occupy so much space within the speculum, that the surgeon cannot see accurately the part of the membrane he is operating on, and also because he considers that they may produce a degree of violence which might be dangerous. The following is the plan of operating which he adopts:—Having brought the membrane fairly within view, under bright, direct sunlight, he introduces a small sickle-shaped knife, with a double cutting edge, and having made the patient inflate the tympanum, so as to make the membrane tense and pressed outward, he gently introduces the point of the knife into its lower, thin, vibrating portion, and, drawing it downwards and forwards, makes a simple incision of the membrane, about a line and a half in length. So simple is this, and so little pain does it give, that the patient has often been unconscious of its performance until made aware of its completion by the air rushing out through the aperture. In about a minute a slight oozing of blood takes place from the edges of the aperture, like that which follows a wound of the sclerotic with an ordinary broad cataract needle, and if left in this condition it would soon heal up; therefore a very fine probe, fixed in a handle and slighty pointed with nitrate of silver by being immersed in the caustic, when heated to fluidity should be immediately passed down into the perforation, the edges of which are thereby cauterized and prevented adhering; and this latter process should be repeated from time to time, as often as the wound shows an inclination to heal, and until we establish a sufficiently large elliptical opening. Where inflammation has extended to the periosteum lining the bony portion of the auditory canal, and to the pericranium over the mastoid process and post-aural region, Mr Wilde recommends making a free incision down through the periosteum there, at least an inch in length. In performing this operation the head should be firmly secured, and supported against some unyielding substance, as the back of a high chair or the breast of an assistant. A stout scalpel is the best instrument to employ; it should be grasped so that the fore-finger and thumb may come down upon the blade, so as to leave about an inch of it uncovered. It should be inserted steadily till the point reaches the bone, which it should be made to traverse, for the full length of the incision. By this means we secure complete division of the periosteum. With regard to the line of the incision, circumstances may require its being made in other directions, but he finds that it is most generally required parallel with, and about an inch from the attachment of the auricle. The knife should be drawn from below upwards; and, from the swollen state of the parts, the depth to which we are sometimes obliged to introduce the instrument is often nearly an inch. The hemorrhage, unless we wish to extract blood, may be arrested by placing a dossil of lint within the incision. The cut surfaces generally present the brown-like appearance seen in phlegmonoid erysipelas. Although pus may not have been reached by the incision, still, immediate relief is almost invariably experienced. The subsequent management of this particular part of such a case must depend upon the circumstance of exfoliation. —*Dublin Quar. Jour. of Med. Science.* Feb. 1848.

126.—*Laryngotomy in Typhus Fever.* By Dr H. FREY of Mannheim.—Dr Frey directs attention to the frequent occurrence in typhus fever of lesions of the larynx, threatening fatal obstruction of the glottis. The principal of these are simple mucous inflammation, fibrinous exudation, deposition of typhus matter with its sequelæ, viz. abscess, ulceration, and sloughing of the parts in the neighbourhood of the glottis. He observes that the degree of lividity of the surface is a false measure of the amount of danger, as in typhus the anemic condition of the patients prevents the development of this condition. He is not deterred from operating in cases where any degree of vital power remains, by the fear of hemorrhage or of subsequent suppuration, having seen many instances of recovery in circumstances apparently very unfavourable. In one case, however, he has seen the operation unsuccessful indirectly on account of hemorrhage. In this case the venous oozing having been uncontrolled by the application of ice, the physicians were induced to have the wound closed, on which suffocation soon afterwards recurred. The hemorrhage is in this case ascribed by the author to the abnormal condition of the blood.—*Zeitschrift für Rationelle Medizin*, 1847, Bd. 6.

[We have had frequent opportunities, in the Edinburgh Royal Infirmary, of observing patients saved from impending suffocation, in the progress or decline of typhus fever, by the timely performance of tracheotomy, which operation is always preferred to laryngotomy there, excepting when the suddenness of the seizure renders a second or two of the utmost importance. A considerable number of the cures have been permanent, and, where death has ultimately occurred, it has generally been from secondary consequences, such as the occurrence of pneumonia or pleurisy, or from the natural progress of the fever, rather than from any circumstances connected with the operation. Hemorrhage has not generally been found to occur to any very considerable extent, and has only been dangerous when the opening into the trachea has been made too wide for the tube, so as to permit of the flow of blood into the respiratory passages. When the deep part of the wound is of limited extent, and the tube is grasped tightly by the opening in the trachea, there is generally no hemorrhage, in consequence of the direct compression of the vessels by the tube. On the whole, the result of experience in Edinburgh seems to show, that deaths occur in typhus much more frequently from the delay, than from the timely performance of an operation which is not in itself fraught with very serious consequences.]

127.—*Ophthalmia from Caries of a Tooth.* By Dr T. EMMERICH of Mutterstadt.—A man, whose general health was quite good, had been for fourteen years subject to a painful affection of the eye, much increased by any excess in food or drink. When examined, the conjunctiva was found congested, as also the sclerotic; the cornea had a pale brilliancy, and presented the marks of old ulcerations. There was also epiphora. One of the upper bicuspid teeth was carious, and the patient stated that the disease of the tooth and eye had commenced simultaneously. The superior maxillary bone was excessively tender at the root of the carious tooth, which was considered to be the cause of the whole symptoms. On the tooth being extracted accordingly, the eye became quite well.—*Zeitschrift für Rationelle Medizin*, 1847, p. 75.

128.—*Congenital Luxation of the Radius in both Arms.* By Dr HOLLSTEIN of Fürth.—The patient, aged fifteen years, had laboured from his birth under a displacement of the radius in both arms, which required adjustment often several times in the day. The form was so much altered, that the upper and fore-arm formed an obtuse angle at the inner side of the elbow. The head of the radius was not easily discovered during extension, being situated under the tendon of the biceps. The movement of the fore-arm in the upper arm, was limited to an angle of 75°. On the right side displacement was greater than on the left; and the power of movement was also less, the muscles being considerably relaxed.—*Walther und Ammon's Journal*, VI. p. 503.

VI.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

129.—*Disorders of the Nervous System during Pregnancy.* By Dr LEVER.—The author lays down the following propositions as the results of his observation:—

1. That pregnancy is occasionally associated with chorea, or convulsive movements; with paralysis of various parts of the body, of the extremities, and of the nerves of special sense; and with mania.

2. That the varying symptoms of such complications may be produced at any period of pregnancy; but when produced, although modified by treatment, are rarely removed during the existence of gravidity.

3. That the patients in whom these complications exist, are women of a highly nervous temperament, of great irritability, or whose constitutional powers have been reduced by some long-continued but serious cause of exhaustion.

4. That in the treatment of such cases, heroic measures are not to be employed; that the curative means consist in improving the secretions, keeping the bowels free, and administering those medicines, and employing that diet, which will increase the tone and energy of the nervous system.

Lastly, That although, in most instances, the symptoms will continue as long as pregnancy exists; yet in the majority of cases we are not justified in inducing a premature evacuation of the uterine contents.

The following cases are adduced in illustration:—

Chorea with Pregnancy.—Case I. At the commencement of the third month of pregnancy, this patient became irritable and pettish. Convulsive movements of the muscles of the face were observed, and in

about a week afterwards tossing of the head. Subsequently she was seized with convulsions of the right arm, then of the left, then of the left leg, and then of the right leg. The mode of speech was also altered. In other respects she was in very good health. A great variety of treatment was resorted to without effect. Labour came on at the full time, and was terminated easily and naturally. While the pains were present, the convulsive movements ceased, but during the intervals they were most distressing. She made a good convalescence, and the chorea disappeared.

Case II.—This woman became a second time pregnant shortly after weaning her first child. The chorea returned, but at an earlier period of pregnancy. About the fourth month an accidental fright induced an attack of uterine hemorrhage, which was followed by the evacuation of the contents of the uterus. She gradually recovered her strength, and the chorea declined and disappeared.

Case III.—In the third month of her first pregnancy this woman was first observed to have lost the perfect control of the movements of the right leg and arm. Afterwards she complained of numbness affecting the whole right side. Two weeks after this, signs of mental disorder appeared, along with some pain in the forehead. This complaint was somewhat of a paroxysmal character, being aggravated generally in the afternoon and at night. Between three and four months afterwards, this woman recovered completely under treatment, and was subsequently delivered of a living child.

Case IV.—This woman, æt. twenty-four, was delivered two years ago, in an easy labour, of a living child. In the third month of her present pregnancy she lost the complete power over some of the voluntary muscles; dropping, for instance, whatever was put into her hand. About the end of the fourth month, while walking, she was taken for a minute or two with swimming in the head and unsteadiness of gait, which caused her to take hold of something near for a support. These feelings recurred several times every day for a month afterwards.

She continued to be troubled with these symptoms variously modified, and accompanied with twitching of the fingers, jactitation of the arms and legs, numbness of the fingers and toes, dizziness of sight, &c. When labour pains supervened, the irregular movements ceased, and she was delivered naturally of a living child. She made a rapid recovery.

Case V.—In her first pregnancy, when seventeen years old, this woman had frequent fainting fits before the time of quickening. Afterwards she suffered from the most copious leucorrhœa, which continued till her confinement at the full time.

Two years after this delivery she became again pregnant, and at the end of the third month a fright induced miscarriage, which was accompanied with considerable flooding, and subsequently by green discharge and irritation about the vagina. Two weeks afterwards she was seized with contortions of the face, numbness, and slight twitching of the right arm, and then of the right leg. These symptoms, along with leucorrhœa, continued till she became pregnant for the third time. Her previous symptoms then became increased; faintings also came on, with great nervousness and depression of spirits. After quickening, her symptoms again became all more aggravated and severe. She improved considerably under treatment, till the time of her confinement, which was natural, and after which the symptoms entirely ceased.

Paralysis with Pregnancy. Case VI.—This woman had for many years been subject to weighty pains in the head, with confusion of ideas. She had never had a fit. In her first pregnancy she was troubled with numbness and partial loss of power on the whole right side, which continued till her delivery. After suckling for some time, the same symptoms again began to affect her, and her child was consequently weaned on the fourth month after her confinement. A life of celibacy was enjoined, and was followed by the best effects. But she again conceived, and in a month after, the symptoms reappeared. In four subsequent pregnancies the same phenomena took place very soon after conception, and continued till delivery put a stop to them. Under lactation they reappeared, and were always removed by the means above stated.

Case VII. This woman, in the eighth month of her ninth pregnancy, was suddenly seized with a tingling sensation, and loss of power in the whole right arm. She experienced decided improvement from the use of zinc, but did not recover till after her confinement.

Case VIII. This woman had suffered from hysteria before and after her marriage. She had miscarried three times, and subsequently borne two children at the full time. In the fifth month of her sixth pregnancy, she was suddenly seized with loss of power over the upper extremi-

ties, and loss of voice. On being visited a week afterwards, the pupils were found irregular and contracting without the stimulus of light, the tongue was protruded at will in a straight line; the upper extremities were rigid and extended; and the hands forcibly supinated. The heart's action was tumultuous, heard all over the chest. These symptoms diminished under treatment, but did not disappear till after delivery.

Case IX. This woman, after her sixth natural labour, was taken with numbness and weakness in the lower extremities, which gradually disappeared. About the third month of her seventh pregnancy, she was seized with paralysis of the lower limbs; this continued till after the delivery, when she completely recovered. In her eighth pregnancy, the paralysis did not come on till after labour.

Partial Amaurosis with Pregnancy.—*Case* X. Soon after the quickening of her fifth child, this woman was suddenly seized with a peculiar sensation in the eyeballs, and found that she could see only the outlines of objects, their centres being dark. These symptoms continued, with slight variations, till delivery, after which she steadily improved, and in three months sight was perfectly restored.

Our author has seen but one case in which the amaurosis was permanent. In one female he had observed it in two successive pregnancies. [Dr Santesson of Stockholm has informed us of the case of a feeble and delicate woman (the wife of an apothecary in Wadstena, a small village in Sweden), who laboured under complete amaurosis of both eyes during the last five months of pregnancy for eight successive times, and all during only ten years. After each delivery she soon completely recovered her sight; but with each pregnancy she became more and more feeble, and made more prolonged recoveries, and, at the same time, the amaurosis became longer in disappearing. In her first pregnancies, sight returned in about a week, but in some of the last she did not completely recover from the amaurosis for a month after delivery.]

Deafness with Pregnancy.—*Case* XI. In this woman, deafness supervened gradually after conception had taken place for the first time. The deafness grew worse and worse with the advance of pregnancy, and, after delivery at the full time, it gradually disappeared. Under protracted lactation it began to return, and was again entirely removed by weaning the child, and a course of tonic treatment.

Case XII. After quickening with her first child, this woman was seized at various times with faintings, hemiplegia, paralysis of one or other extremity, speechlessness and irritability of temper coming on daily about the same hour. These symptoms diminished, but did not entirely disappear before delivery. In her second pregnancy she lost the power of speech for two weeks; and on rising, a fortnight after delivery, she found she had lost the power over her lower extremities, but gradually regained it, and soon recovered completely.

Case XIII. This woman at the commencement of her first pregnancy experienced a great change in her manner and temper. "From being light-hearted and gay, she sat wherever she was placed, neither turning her head nor her eyes to one side or the other; she was a living automaton." She continued in this state till delivery, after which she recovered completely.

Case XIV. A young lady was seduced by her pretended lover, and became pregnant. Marriage was refused. She became insane, and continued so till the child cried on delivery. At that moment she recovered completely.—*Guy's Hospital Reports*, Vol. V. 1847.

130.—*Puerperal Convulsions Treated by Chloroform Inhalation.* By Messrs CLIFTON, FEARN, and Dr WILSON.—Mr Clifton's patient was in labour with her second child. Convulsions came on before the first stage was completed. The membranes were ruptured, and she was bled to about twenty ounces, after which she experienced some relief; but the convulsions soon returned, of a very severe and apoplectic character. She then began to inhale chloroform, and in less than half a minute sank into a most tranquil sleep. Labour-pains still continued at regular intervals; and she was safely delivered of a living male child, having been under the influence of chloroform forty-five minutes, without any recurrence of the convulsions. She made a good recovery. —*Medical Times*, Feb. 12, 1848.

Mr Fearn's patient, æt. 17, was taken in labour at the seventh month. After pains had continued for some hours, convulsions of a severe character set in. Bleeding and purging enemata gave some relief, but in a short time she became alarmingly worse, being in a state of total insensibility, the pulse very small and frequent, and the pupils exceedingly contracted. The head of the child was low down, and uterine efforts had ceased. Chloroform was then administered in the usual way, and in a few minutes the con-

vulsive movements, which had endured a whole day, entirely ceased. She was easily delivered with the crotchet. During the night she had a slight convulsion, but subsequently her recovery was uninterruptedly good.—*Medical Gazette*, Feb. 11, 1848. [We know of another case of puerperal convulsions having occurred in January last in the practice of Dr Wilson of Glasgow, and in which chloroform was successfully administered. After the sleep was induced, the convulsions entirely ceased, and the woman was safely delivered.]

131.—*Double Uterus and Vagina.* Dr Huguier.—This woman, shown to the French Academy of Medicine, became pregnant in one half of the uterus. It was very remarkable that, after delivery, the mamma of the corresponding side alone became hard and swollen.—*Compt. Rend. de l'Acad. de Médecine.*

132.—*Artificial Vagina.* Dr de Bal and M. Kluyskens.—*Case* I. A girl, æt. eighteen, had for some time severe pains in the back and side. The uterus was enlarged to the size of that of the sixth month of pregnancy. Vomiting and febrile symptoms had supervened several times, but at last became continued. By means of incision and the use of the trocar, upwards of two pints of a very viscid liquid, without smell, was evacuated. The patient recovered.

Case II. A girl, æt. eighteen, had occasionally suffered from colic pains for fifteen months. These gradually became more and more frequent till the uterine tumour acquired the size of that of advanced pregnancy. M. Kluyskens made an incision between the urethra and rectum, which he deepened till he reached the cavity. Five pounds and a half of a fluid like viscid blood, and of a faded smell, was evacuated. She recovered.—*Annales et Bullet. de la Societé de Méd. de Gand.* July 1845.

133.—*Compression of the Aorta in Post Partum Hemorrhage.* M. Escalier.—In a case of hemorrhage after delivery, in which every means had failed to arrest the flow of blood, M. Escalier succeeded in stopping it by compression of the aorta by his hand, above the umbilicus. He considers this neglected mode of treatment useful not only in arresting the flow of blood towards the uterus, but also by sending it back towards the brain, so as to prevent those fits of convulsions which so frequently occur after, or during severe hemorrhage and often prove fatal.—*L'Union Médicale*, Feb. 10. 1848.

134.—*New Operation (par glissement) for Vesico-vaginal Fistula, with Loss of Substance.* M. Jobert.—In this operation, the bas-fond of the bladder is separated by the knife from the anterior surface of the vagina and neck of the uterus, a proceeding which allows the easy slipping (*glissement*) of the upper lip of the fistula, and consequently its approximation to the lower, where it is retained till perfect agglutination takes place. M. Jobert has several times succeeded in completely curing vesico-vaginal fistula in this way where all other means had failed.—*L'Union Médicale*, 1847.

VII.—MATERIA MEDICA AND THERAPEUTICS.

135. — Chloroform. *Preparation.* — MM. Larocque and Hurault have prepared chloroform, by the following modification of the process of Soubeiran, obtaining from six to six and a half tenths of the weight of alcohol employed. The process of Soubeiran yields only from two to three tenths. Water 40 litres, lime 5 kilog., chloride of lime 10 kilog., and alcohol 1½ litres, are mixed and distilled in the usual way. The fluid obtained, after separation of the chloroform, is again introduced into the still with 10 litres of water; the same proportions of lime and chloride of lime, and only 1 litre of alcohol; what was previously in the still being allowed to remain. The whole is distilled, as before. If the vessel be large enough, the distillation may be repeated a third and even a fourth time, the same proportion of substances being employed as indicated for the second operation.

By the above method, they are enabled to furnish the chloroform at 11s. 8d. the kilog., or something like 4d. an ounce.

They observed also, that the more quickly the operation is conducted, the greater the quantity of chloroform obtained. The yellow colour sometimes seen in impure chloroform, is attributed by them to the presence of the bichloride of tin, and is only noticed when a tin still is used. With a copper vessel they always procure a colourless product.—*Journal de Pharmacie et de Chimie*, February 1848.

Physiological action (a) *on Animals.*

MM. Dumeril and Demarquay, in a communication to the French Academy of Sciences, have directed attention to the lowering of the temperature observed in animals under the influence of ether and chloroform. The animal heat sinks, according to their experiments, in dogs and fowls, from ½° to 5° R., the diminution increasing with the length of period during which the insensibility is maintained. This effect is constant, and is observed equally when the vapour is introduced by the rectum, as when it is inhaled.—*Comptes Rendus*, February 1848. A warm discussion has arisen among the French experimenters, in reference to the changes observed in the blood of animals submitted to the inhalation of chloroform. M. Amussat asserts that the arterial blood assumes a dark venous hue, while MM. Gerardin and Verrier maintain, on the contrary, that it undergoes no change. (See Retrospect, p. 49.) Lastly, It is affirmed by M. Gruby, that the inhalation heightens the intensity of the red colour of arterial blood, and changes the dark hue of the blood in the veins to a bright red.—*Comptes Rendus*, February 1848.

(b) *On Man.*—In some interesting remarks on the action of narcotic poisons, Mr Sibson observes, that "under the increasing influence of ether and chloroform, the pupils first contract, then oscillate between contraction and dilatation, and finally dilate. So long as the pupil is contracted, the patient, when operated upon, frequently manifests an unremembered consciousness; he is, in fact, in the state of sopor or sleep. When the pupils dilate, and the iris is immovable, consciousness is extinguished, and the patient is in the state of coma." These successive changes of the pupil, Mr Sibson explains by reference to Valentin's view of the physiology of the iris. This distinguished physiologist conceives that the contraction of the pupil constitutes a safe guide in the administration of chloroform.

Mr Sibson asserts that the state of the pupil is due to the reflex action of the brain, through the ciliary filaments, and from the motor oculi, and that its dilatation is due to the reflex action of the spinal marrow, through the ciliary filaments from the cerebro-spinal nerves. In sleep, or sopor, Mr Sibson supposes that although consciousness and volition are absent, the cerebral reflex action is still active, and induces contraction of the pupil; but, in coma, the reflex function of the brain is destroyed, and dilatation of the pupil is the consequence, as the reflex function of the spinal marrow acts uncontrolled. During the stage of sopor, there is frequently rigidity of the muscular system, which is speedily followed, on the supervention of coma, by complete relaxation of all voluntary muscles, except those of respiration. When it is desired simply to produce insensibility to pain, or to exert a calmative action, as in delirium tremens, the inhalation ought to be immediately discontinued when the pupils begin to dilate. If the object be to induce complete muscular relaxation, as in tetanus, dislocations, &c., the inhalation may be continued a little longer if necessary.

The question of the cause of death in the case of Hannah Greener, detailed in our last Number, has given rise to much difference of opinion. We cannot attribute the fatal event to *idiosyncrasy*, as the girl had, some months previously, been etherized without suffering any bad effects; and it is improbable that idiosyncrasy should exist in reference to chloroform (and not to ether), seeing that such a close resemblance exists between the actions of these agents when inhaled. Dr Snow maintains that the patient was directly poisoned, in consequence of the rapid administration of the vapour in a very concentrated form.

Mr Meggison, under whom the melancholy event occurred, warmly combats Dr Simpson's view (see Retrospect, p. 50). He asserts that a teaspoonful of brandy only was administered, which the girl swallowed, though with difficulty. There was not the slightest symptom to indicate choking. He further argues, that as the patient was pulseless before she got the brandy, it is difficult to conceive how the "enormous congestion of the lungs" could have been formed subsequent to its administration. The girl died in a few seconds, but some time and a certain activity of circulation are requisite for the production of such congestion of the lungs. Lastly, he mentions that, in Dr Glover's experiments with chloroform, the blood was found fluid, and in some of the animals the brain and its membranes were much congested.—*Medical Gazette*, Feb. 25, 1848.

Dr Jameson has published a detailed account of the case noticed in our last Number, of Arthur Walker, who killed himself by inhaling chloroform. He had been unconscious for upwards of twenty minutes before Dr Jameson saw him. His countenance was then pale and composed, the pupils much dilated, and the lips livid. No pulse could be felt in the extremities, nor could any sound or motion of the heart be detected. The breathing had ceased, and the temperature of the extremities was evidently sinking. Artificial respiration

was diligently practised for some time; a vein was opened at the bend of the arm, but only a single drop of blood oozed from the orifice; in short, the *post-mortem* appearances closely resembled those found in Hannah Greener.

The body was examined twenty-four hours after death. There was found considerable venous injection of the brain and its membranes. A small quantity of serum flowed from the ventricles, which some of the gentlemen present thought had a faint sweetish odour, like that of chloroform. The lungs were turgid, and extensively adherent to the walls of the chest. They were loaded with dark coloured blood, particularly at the three following places, where the engorgement was extreme, and of the apoplectic character: viz. "the upper margin of the lowest lobe of the right lung, the lower lobe of the lung, and a smaller portion of the upper lobe of the right lung." The two first-named apoplectic portions of lung were at least six inches long, and averaged about one and a half inches in depth. The lungs were generally emphysematous, and air had escaped into the subpleural cellular tissue. The heart was extensively adherent to the pericardium. The right side of the heart was distended with dark fluid blood; the left was empty. The walls of the right ventricle were unusually thin, and the cavity itself was enlarged. The abdominal organs were moderately congested. The blood was uniformly fluid, unusually thin and dark-coloured, and presented no peculiar odour. On distillation, it yielded a small quantity of a volatile liquid, possessing a strong smell of chloroform, and presenting some of its chemical characters.

The quantity of chloroform inspired, is supposed to have been about three or four drachms. Dr Jameson considers the cause of death to have been asphyxia, consequent upon the inhalation of chloroform. He thinks it probable that the fatal issue may have been facilitated by the unfavourable position in which the body was placed, and possibly also by the morbid conditions which existed within the chest.

[In order to understand fully the post-mortem appearances in the case, it is necessary to mention, that for some time after death, the chest was inflated by means of a bellows, the nozzle of which was introduced into an opening made in the trachea.]

136.—*Traumatic Tetanus cured by Quinine and Morphia.* By Dr Bishop.—A man accidentally ran a rusty nail into the hollow of the foot; the wound progressed unfavourably, and on the 18th day severe tetanus supervened. He was freely purged, and counter irritation was applied to the spine. The following was ordered to be taken daily:—

℞. Sulph. quinæ.....gr. 15
Sulph. morph.....gr. ¾
Syr. simp.....q. s. ℳ.

He improved gradually; but on the sixth day of the treatment the quinine and morphia were suspended, and the symptoms returned with their previous severity. The medicine was resumed on the seventh with the same happy effect, and on the eleventh day of the treatment he was convalescent.—*Southern Journal of Medicine and Pharmacy, America*, November 1847.

137.—*Acetate of Morphia in Melancholia.*—The form of mania which is most relieved by the acetate of morphia is melancholia, tending to suicidal madness; but insanity, which arises immediately after parturition, is equally amenable to similar treatment. Dr Seymour observes (Thoughts on several Severe Diseases, &c.), "It has generally been, in mild cases, my practice to begin by a quarter of a grain every night, in solution; then, after a week, to increase this to half a grain; it has rarely in such cases been necessary to increase the dose beyond half a grain. In severe cases, I begin with half a grain, and increase it speedily to a grain." He rarely exceeds this dose. The medicine is given at bed-time, and must be repeated without the intermission of a single night, for several weeks in mild cases, and for, at least, three months in the most severe ones. Dr Seymour has employed this mode of treatment in ninety cases, of which seventy have recovered, and no case is considered a recovery unless two years of unabated health have elapsed since the treatment was discontinued.—*Dublin Quarterly Journal*, August 1847.

138.—*Tartrate of Magnesia.*—[We have prescribed in several cases the solution of this salt, prepared in the manner indicated by M. Aviat. (*Retrospect*, p. 52.) Its purgative action is, contrary to the statement of Aviat, weak and uncertain, being much inferior to the sulphate in this respect, for which it cannot be considered a good substitute.]

139.—*Adulteration of Medicine.*—[Every day adds to our conviction of the necessity of directing attention to this subject, as undoubtedly much of the scepticism in medicine, as well as the irregularity in the

action of drugs, is traceable to this source.] The following analysis of a *blue pill*, sold extensively in New York, is instructive:—

Mercury,	7·5
Earthy clay,	27·0
Prussian blue,	1·5
Sand,	2·
Soluble saccharine matters,	34·0
Insoluble organic matters,	12·0
Water,	16·0
	100·

The Committee of Inspection of the College of Pharmacy, New York, asserts that the *quinine* generally found in America is at least one half *salicine*. Some dealers adulterate it with flour. There cannot be a doubt, that the great irregularity in the action of quinine is to be ascribed in part to this source, and serious accidents might occur on the commencement of a new parcel, which might chance to be genuine.[1]—*Southern Journal of Medical Science*, November 1847.

140.—*Easy Method of detecting Carbonates of Potash in Iodide of Potassium.* By M. DE TREZ.—Rub in a mortar a few grains of the suspected iodide with an equal quantity of muriate of ammonia; if carbonate of potash be present, a distinct odour of ammoniacal gas is immediately perceived.—*Journal de Pharmacie.*

141.—*Ferrocyanate of Potassa for Ascarides of the Rectum.*—A correspondent of the American *Journal of Medical Sciences*, strongly recommends the use of this salt by injection, in the treatment of inveterate cases of ascarides. He says, "Commence with five grains of the prussiate, rubbed up in two ounces of water, or mucilage of gum arabic (the pure water is preferable, except in cases where much irritation of the mucous membrane exists); throw this into the rectum, and retain it until the next regular defecation. Repeat this daily, gradually increasing the quantity of the prussiate until perfect and permanent relief is afforded. I believe the greatest relief will be experienced after using it once or twice."—*Medical Gazette*, July 1847.

142.—*Adulteration of Oxide of Zinc.* By M. L. SCHAFFNER.—The oxide, treated with boiling water, gave a light mucilage, in which tincture of iodine indicated the presence of starch.—*Journal de Pharmacie.*

VIII.—FORENSIC MEDICINE AND TOXICOLOGY.

143.—*Injury of the Head, alleged to have been Produced by a Fall at the Moment of Birth—Suspected Infanticide.*—The body of an infant, born the day before, was disinterred immediately after burial, for the purpose of a medical examination into the cause of death. It was a female infant, strong, fat, and well formed. The surface was of a dull white colour. There was a bandage around the body, covering the navel. The remains of the navel-string were less than half an inch in length, dry, firmly tied; the extremity irregularly cut. There was no mark of injury on the infant, except on the head, over the middle of the left parietal bone, where there was a stellate wound. A rounded layer of the scalp, adhering at its anterior and exterior margin, to the extent of four-fifths of an inch, covered a wound about the size of a crown-piece. This portion of the scalp was detached every where besides, both in its margin and under surface. The pericranium was separated over half the wound, and the bone laid bare. An extensive ecchymosis raised the scalp from the cranium, and the bones themselves were infiltrated with blood. In other respects, the bones of the cranium were uninjured. On the inner surface of the cranium corresponding to the external wound, there was a red discoloration. Over the fissure between the hemispheres, beneath the dura mater, there was a considerable effusion of red coagulated blood. No appreciable alteration in the brain, the heart, or the lungs. There was a very small and thin extravasation on the convex surface of the liver. The umbilical arteries were wide open, after being divided near the umbilicus. The stomach contained a transparent liquid, in which were a few streaks of blood. The mother of the child was a young woman of twenty-five. It was her first child. According to her account, she was suddenly seized in labour while sitting alone by the fire and, as she attempted to reach her bed, the child was all at once expelled, and

[1] [We bought, at the house of Pelletier, Paris, some aconitina, half a grain of which, introduced into the cellular tissue of a rabbit, produced very slight effects. The twelfth of a grain of the genuine alkaloid, as prepared by Messrs Smith, Edinburgh, introduced in the same manner into the system of the rabbit, proves fatal in a few minutes. That the aconitina of Pelletier, applied in the form of ointment in the treatment of neuralgia, can be of no service, is shown by the experience of the few French physicians who have tried it.]

fell upon the floor, thus wounding its head; that she had afterwards the assistance of a midwife, and that the infant died about four hours after it was born. It could not be ascertained whether or not the umbilical cord had been broken at the moment of birth. The floor was of plank, worn through in several places; but the head might have come in contact with a small part of it which was covered with lime and gravel.

After much discussion, the medical men consulted came to the conclusion, "that the injury discovered in the head of this infant could not, by any means, be the result of a fall on the ground during delivery in the standing posture; that its form, its extent, and the laceration of the pericranium, as well as the great amount of the effusion of blood beneath the membranes between the hemispheres of the brain, proved the exercise of violence during life; and that the death of the infant had been occasioned, first, by that violence; secondly, by the hemorrhage, which had hastened its occurrence; lastly, that the furrows (sillons) observed on the skull, confirmed their opinion as to the violence offered." In short, they declared that the infant had been murdered.

In answer to additional questions put to them by the authorities, they declared their opinion, that if the mother had inflicted the injury, it was not likely that it was done after the delivery, owing to the state of exhaustion in which she must have been, and that it was equally unlikely that she would be able to inflict such an injury in the progress of labour.

In consequence of this last statement, her father and mother were put on trial along with her; but, owing to defect of evidence, all the three were acquitted.—*Gazette Médicale de Paris*, March 11, 1848.

[Though it cannot be regarded as a common case, yet there is undeniable evidence that a woman, even after a first delivery, sometimes retains sufficient force to perform acts far more difficult than the infliction of such an injury as that detailed above.]

144.—*Thefts and Fire-raising by a Female Servant in a supposed State of Fatuity.*—The girl was twenty-one years of age, and had been brought up in a Foundling Hospital. Having come to Paris, she became child's maid in a private family. She had no sooner been placed in this family than the bells began to ring of their own accord, the doors to open, various unusual noises to be heard, while several articles of silver plate disappeared. The girl talked much of God and of her confessor. By and by a fire occurred in the house, causing a considerable loss, and again pieces of silver plate were missing. She wished to go and find a neighbouring priest, who, she said, would discover what had become of the silver-plate. But an agent of the police being talked of, she was at no loss to discover where to find it. Being brought to trial, the jury acquitted her on the ground, it is to be presumed, of her imbecility of mind.—*Gazette des Tribunaux*, 5th October 1847.

[In a case of this kind, that is, on the assumption that the girl was not a responsible agent, a simple acquittal is plainly erroneous. An irresponsible person already proved to have committed numerous acts of theft, and to have set a house on fire, is let loose on the world unreproved, or rather, after having gained a victory over justice, to commit new crimes, very probably of a far more heinous character than those for which she was tried at the October sitting of the Assize Court of the Department of the Seine. But it may be said, the offences were not of a sufficiently aggravated nature to warrant a decision which should confine her for life as a lunatic. And undoubtedly it would be a serious burden on the state to support all those who are liable to commit thefts, and the like, owing to the weakness of their faculties. But is this a reason why such persons should not be punished when detected? Surely, if they escape unpunished, they are encouraged to repeat the offence. Public punishment carries nothing of vengeance in it. Its object is to correct the offender, so as to save him or her from self-indulgence, and, at the same time, to protect society from injury. It is only in the case of the completer forms of mental alienation, and in regard to the severer punishments, that there is any just ground for acquittal on the plea of irresponsibility. There is no choice; there must be either confinement on account of mental alienation, or punishment for the offences committed when the individual is left at large.]

145.—*On the comparative efficacy of the Hydrated Sesquioxide of Iron and Magnesia as Antidotes to Arsenic.* By Caventou and Bussy.—Caventou supports, in opposition to Bussy, the superiority of the hydrated sesquioxide of iron over magnesia as an antidote to arsenic. He regards the compound formed by arsenic with the iron-antidote as much less apt to be decomposed by the salts of the stomach and bowels than that formed by it with the magnesia-antidote. These two chemists are in particular at variance as

regards the effect of the hydrochlorate of ammonia within the alimentary canal on the magnesia - compound with arsenic. Caventou objects that the arsenite of magnesia is much more readily acted on by the hydrochlorate of ammonia than the arsenite of iron; so that, when the former is produced by the antidote, more arsenic is apt to be again reduced to the soluble form, than when the latter is the product of the antidote used. Bussy, however, affirms, that an excess of magnesia being employed, the hydrochlorate of ammonia is destroyed, so that no such re-solution of the arsenic follows. Caventou replies, that the decomposition of the hydrochlorate of ammonia by the excess of magnesia, cannot take place without the extrication of free ammonia, which by its irritating qualities must complicate the case, and concur with the arsenic in injuring the mucous membrane. Caventou, however, in the end acknowledges, that magnesia should be used if the iron antidote be not at hand, care being taken that it is not too much calcined.—*Gazette Médicale de Paris* Jan. 22. 1848.

[These disputes as to the effect of the minute quantity of hydrochlorate of ammonia, contained naturally in the alimentary canal, on these rival antidotes, will appear little better than a species of pompous trifling, when it is considered how doubtful it is, if either the one or the other of these so-called antidotes can be of any efficacy in an actual case of poisoning by arsenic. It is well ascertained, that when arsenic is in solution both the iron-antidote and the magnesia-antidote will produce the designed effect; but when the poison, as it commonly happens in real cases, is in the form of powder, there is too much reason to fear that no salutary effect will follow. We are far from wishing to discourage the use of the one or the other, or a mixture of both these so-called antidotes; yet it is not to be forgotten that a reliance is not to be placed on either, to the exclusion of other means of counteracting or removing the poison. We may fortify our opinion by the following extract from Dr Taylor's late work:—"I have placed these substances in the list of antidotes, in deference to the views entertained by some eminent toxicologists: but I do not consider it the less necessary to state here those circumstances which induce me to believe that no reliance can be placed on either of them in cases of poisoning by arsenic."—P. 86.]

146.—*Poisoning by Sausages.*—Three inhabitants of Wurtemberg partook of sausages made of liver, lung, and brain of pork, with bread and milk, seasoned with spices, and smoked. One of them vomited, had colic pains, lost his sight, and died in ten days. A second lost his sight also, as well as his voice; his extremities became cold; he swallowed with extreme difficulty; there was paralysis of the eyelids; and at last the patient died suddenly, after the symptoms had undergone an evident amelioration. On opening the body, the blood was fluid, and the viscera showed an extreme friability. The third recovered, after having exhibited symptoms very much the same as those observed in the other two cases.—*Journal de Pharmacie*, Feb. 1848.

147.—*Poisoning by Camphor.*—A robust young man, twenty years of age, being in a laboratory while lumps of camphor were broken down, swallowed bit by bit to the extent of two drachms. Becoming affected with headache, he went home, and then his actions and gestures took a strange turn. After some gambols he went into his own room, whence he came out very soon stripped entirely naked, dancing, and seeking to leap out at a window. A medical man being called in, found the patient in a state of excitement bordering on frenzy; the pulse small, 180; the conjunctivæ injected; the pupils a little dilated; the respiration hurried; the breath exhaling the odour of camphor; the face pale, without intelligence; the desire to pass urine frequent; the urine clear, and with the camphor-odour; a viscid sweat covering the whole body. The wine of opium was administered. The patient vomited the contents of the stomach, in which were bits of camphor. He had an inclination to sleep, which was combated. Soon after, some amelioration of the symptoms being observed, he was permitted to sleep, and, after sleeping for three hours, he awoke without any recollection of what had passed.—*British American Journal of Medicine, and Union Médicale.* Feb. 12, 1848.

148.—*Detection of Arsenic.*—M. Tizot recommends that all arsenic should be mixed with red sulphuret of mercury, colocynth in powder, and creosote. By this means, colour, taste, and smell, would all combine to render its detection easy when mingled with alimentary substances.—*Report of Proceedings of Academy of Sciences of Paris.*

[Considering the many delicate uses to which arsenic is applied in the arts, we fear there are but few purposes for which arsenic is kept that will permit of such an admixture.]

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

VOL. I. MAY, 1848. No. IV.

I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

149.—*On the Anatomy of the Liver.* By Dr LEIDY.—In the lowest orders of the animal kingdom no biliary structure can be detected. In the *polypi*, the *polygastrica*, the *annelida*, and in some of the intermediate orders, its existence appears probable, but the form is rudimentary, consisting of cells, forming part of the parietes of the digestive cavity, or of cœca appended to the sides of the alimentary canal. A distinct hepatic structure is first observed in the *myriapoda*, and is found to be the same as that existing in the *insecta*. In these classes of animals, the liver consists of a number of distinct tortuous tubes, sometimes terminating in blind extremities, at others uniting, so as to form loops. These tubes are found to be formed of a delicate basement membrane, lined by secreting cells. The cells are of a round or oval form, contain a nucleus with its nucleolus, and are filled with a finely granular matter, and numerous minute oil globules. The cavity of the tube is generally found filled with granules and oil globules.

In the *crustacea* the liver consists of an aggregation of long conical cœca, each of which is composed of a sac of basement membrane, its inner surface being lined with secreting cells. From each cœcum a narrow duct passes off to join a common trunk, which opens into the intestinal canal near the pylorus. The same structure is found in the *mollusca*, with this difference, that the cœca, instead of being elongated, are of a bulbous form. A large quantity of oil is found in the secreting cells of the liver in both of these classes.

In *vertebrata* the liver is made up of a number of lobules, which are composed of the ramifications of biliary tubes. In the interspaces of this network the blood-vessels ramify, and form an intimate anastomosis; the whole being closely connected by white fibrous and yellow elastic tissue. The biliary tubes consist of cylinders of basement membrane, lined by numerous secreting cells; they are generally from two to two and a half times the diameter of the cells. These cells are filled with a finely granular matter and minute oil globules. The quantity of oil contained in the liver varies greatly, being much increased in fatty degeneration of the organ. Blood is conveyed to the liver by two sets of vessels, the hepatic artery and the portal vein. The blood contained in the former appears appropriated to the nutrition of the organ; while the latter probably conveys to the secreting structure the fluid, out of which the bile is elaborated. Branches from both of these vessels enter the lobules, and converge towards their interior, where they terminate in trunks, which are the commencement of the hepatic veins.—*American Journal of the Medical Sciences*, January 1848.

[These observations of Dr Leidy are interesting; and, were his opinions with regard to the structure of the liver in the *vertebrata* confirmed, an important advance in anatomy would be made. But there is not in his paper sufficient proof of the correctness of his views to warrant us in accepting them unreservedly, more particularly as the determination of the exact mode of termination of the biliary ducts appears to have hitherto baffled the best observers. Considerable probability is, however, given to the opinions of the author by the facts ascertained with regard to the comparative anatomy of the organ. It is interesting to find that fat enters into the structure of the liver throughout the whole animal series.]

150.—Professor BUDGE *on the Influence of the Nervous Centres and Vagi Nerves upon the Movements of the Heart, Stomach, and Intestines.*—When the medulla oblongata is stimulated by electro-magne-

tism, the heart is rendered quiescent, while the whole body becomes tetanic. On the other hand, when the spinal chord is irritated by the same agent, the contractions of the heart continue, while the voluntary muscles are thrown, as before, into tetanic contraction. If the vagi have been previously divided, the contractions of the heart are unaffected by the electro-magnetic excitation of the medulla oblongata. He found that the application of the excitant, even to one of the vagi, was sufficient to arrest the contractions of the heart during its application; while Professor E. Weber, in his experiments, found it necessary to apply it to both vagi to produce this effect. When he stimulated by this agent the sympathetic nerve alone, he found, as the brothers Weber had previously done, that it produced no effect on the heart's action. When the chain of the electro-magnetic apparatus is laid across the heart of a frog, so as to touch the sides of both ventricles, its contractions are increased in frequency, and it is not until this excitation is frequently repeated that the heart becomes still. The same phenomena occur in this last experiment, whether the central organs of the nervous system be entire or previously destroyed. E. Weber has observed the same increase of the contractions of the heart when the electro-magnetic current is sent directly through its substance. Budge has succeeded in arresting immediately the movements of the auricle on applying the chain to its upper wall, a result not observed in Weber's experiments. These effects of the electro-magnetic influence upon the contractions of the heart, when applied to the medulla oblongata, may be explained in one of two ways. 1. By supposing that there is a force capable of restraining the contractions of the heart seated in the medulla oblongata and vagi, which can be raised to increased action by the electro-magnetic stimulation. 2. That this excitant, applied to these portions of the nervous system, debilitates for a time the contractility of the heart. Budge declares himself in favour of the latter explanation.

He also found that the same excitation, applied to the medulla oblongata, cerebellum, and vagi, caused increased contractions of the stomach, small intestines, and caput cœcum in rabbits, an effect very different from what it produces on the heart. When the vagi have been previously divided, these increased movements of the digestive canal are not observed.—*Wagner's Handwörterbuch der Physiologie.* 17th Lieferung, 1847.

151.—*On the Changes which the Blood-Globules undergo in the Spleen.* By Professor ECKER of Basle.—Besides the granules and ordinary splenic cells, there are found in the spleen of the rabbit, sheep, dog, and calf, and more especially in that of the frog and salamander, pale cells of the diameter of 0·007 m. m., containing a blood-globule and a finely granular matter; on adding water to them the cell-wall is sometimes ruptured, and the continued globule discharged, becoming pale and disappearing. Other cells are found varying from the diameter above mentioned up to 0·015, or even 0·030 m. m. They are sometimes round, sometimes irregular; they frequently contain one or more granulated nuclei, and a number of blood-globules, varying from one to ten, or even more; and when the nucleus is absent they are filled with a finely granulated mass. The membrane of the cells is of varying distinctness, sometimes amounting to a mere film. The contained granules are often yellow, brown, or blackish; the blood-globules are mostly shrivelled, and of very various sizes; they are little affected by water. M. Ecker believes that the spleen is the organ in which the blood-corpuscles undergo their last metamorphosis, being in fact broken up into the granular masses above mentioned, which are carried by the vena portæ into the liver, and thence expelled from the system. The researches of M. Kölliker, who has also observed these cells, show that they are present in all vertebrated animals.—*Gazette Médicale de Paris.* No. 7. 1848. *From Zeitschrift für Rationelle Medizin.*

[We have several times seen the pale corpuscles, containing yellow blood globules, described by Professor Ecker, and have much pleasure in confirming his observations. There can be little doubt that the coloured blood corpuscles are formed originally as nuclei of colourless ones.]

152.—*A new Method of determining the whole quantity of Blood contained in the Body of an Animal.* By M. WEISZ of Vienna.—M. Weisz, dissatisfied with the older and faulty methods employed to effect this object, proposes a plan which appears likely to lead to much more accurate results. His method is, in the first place, to draw from the vein of an animal a quantity of blood. Having ascertained the per centage of iron contained in this, he destroys the animal, and calcines its body; he next determines the amount of iron contained in the ashes, and then, by a simple calculation, arrives at the entire

quantity of the blood. It has been objected to this method, that other constituent parts of the body besides blood contain iron, particularly hair, bile, urine, milk, sweat, and the black pigment of the eye. These parts may, however, be easily removed before commencing the process of calcination. Iron also enters into the composition of chyle and lymph, but only in very minute quantity; any possible fallacy may, however, so far as the chyle is concerned, be to a great extent avoided, by killing the animal some hours after a meal, when the quantity of that fluid is about its minimum. M. W. anticipates no difficulty in the practical working of his scheme, from the slight and scarcely appreciable difference in the proportion of iron contained in arterial and venous blood. By the above method, the normal proportion of iron in human blood being already known, the whole amount of blood in the healthy human body may be readily ascertained in cases of sudden death. It possesses another advantage in the facility of its application towards the determination of the quantity of blood contained in individual organs.—*Heller's Archiv.*, 6th Heft. 1847.

153.—*Presence of Copper and other Metals in the Blood and Liver of Man, and the Lower Animals.* By MM. MILLON, DESCHAMPS, and HARLESS.—M. Millon ascertains the presence of different metals in the blood by a very simple mode of analysis. The blood, as it escapes from the vein, is received in about three times its bulk of water, and the fluid poured into a bottle of chlorine, and agitated. It immediately coagulates, becomes brown, and finally grey, and the fluid part is rapidly and easily filtered off. In the filtered fluid he readily determined the presence of copper, lead, manganese, and silica. He further ascertained that the copper and lead are, like iron, attached to the globules, and not distributed through the mass of the blood. A kilogramme of the clot having given 0·083 of a gramme of those metals, while the same weight of serum gave only 0·003, a quantity no doubt due to the solution or suspension of a minute proportion of globules in the serum. It is probable from the facts thus ascertained, that these metals, like iron in the blood, participate in some physiological function, which, however, it is impossible for us at present to define.—*Académie des Sciences*, 10th January 1848.

M. Deschamps, on his part, has endeavoured to trace the source of what he calls the physiological copper, and he concludes from his investigations, that all soils contain copper, derived in all probability from the decomposition of copper pyrites; that vegetables extract a portion of the copper from the soil, which afterwards finds its way into the animal system along with the food, though in the instance of man a certain portion both of copper and lead may obviously be derived from the vessels in which his food is cooked. The copper appears to be contained in the soil as carbonate, and as that salt is soluble in carbonate of ammonia, M. Deschamps considers it to be the substance by the assistance of which the copper is carried into the vegetable system, in which it is permanently deposited by the decomposition of the ammonia, for the formation of the nitrogenous constituents of the plant.—*Académie des Sciences*, 17th January 1848.

Harless has made a variety of very important observations on the blood of the ascidia, and of the cephalopoda generally. He had observed that in these animals, though perfectly colourless in the vessels, the blood becomes deep blue when permitted to escape. The production of this blue colour he found to depend solely on the carbonic acid of the air. When a single bubble of that gas is sent through the blood, the blue colour is produced, and gradually becomes darker as the current of the gas continues; but it is again almost, though not altogether, deprived of its colour by agitation with oxygen. The blood of the Eledone presented these phenomena after being carried from Trieste to Nurnberg. Analysis of the blood by Von Bibra gave the following results:—

100 parts of blood gave of solid constituents,	7·33
... ... ash ...	2·63
100 parts of dry blood gave of ash,	35·88
100 parts of ash gave—	
Chloride of sodium,	73·1
Sulphate of soda,	2·0
Phosphate of soda a doubtful trace.	
Phosphates of lime and copper,	24·9
	100·0

Iron was entirely absent, and appears to have been replaced both here and in the liver by copper. He found in the ash of the liver, 1·12 per cent. of copper, the presence of which was fully determined by a little galvanic circuit of zinc and platinum, by sulphuretted hydrogen, and by the blowpipe. The presence of copper in the liver, recalls to memory the discovery of it in certain biliary calculi by Bertozzi, Heller and Gorup Besanez; but its constant occurrence, and its replacing the iron of the blood, sufficiently show that the opinion put forth by these chemists of the liver being the organ through which

foreign metals are thrown off from the system, is inadmissible. As regards the source of the copper, Harless considers it impossible that it could be derived from the sheathing of ships, as those animals in which he detected it were caught at a distance from harbours in which such vessels lie, and he concludes that it must have been taken in along with their food, which in the cephalopoda consists of crustacea and small fishes. He has found copper in the Cancer pagurus, Acanthias zeus, and Conger vulgaris, and in quantities always inversely proportional to the iron which they contain.

The blood of the Helix pomatia likewise contains a large quantity of copper, that portion of the ash which was insoluble in water having given 2·57 per cent. of metallic copper. This blood, at least in winter, becomes blue by exposure to the air; but, what is very remarkable, under totally different circumstances from those which produce the coloration in the Eledone, the blue being destroyed by carbonic acid, and restored by oxygen, an experiment which could be repeated many times on the same blood. In the blood of the Helix pomatia, alcohol produces a colourless coagulum. Ammonia destroys and hydrochloric acid restores the blue colour. The colouring matter is precipitated by alum, and rapidly redissolved by an excess of the precipitant, but by the addition of ammonia it is entirely thrown down. The compound of alumina and the colouring matter, gave 29·53 per cent. of a green ash containing a large quantity of copper. An analysis of the colouring matter itself is given; but as the author had not an opportunity of repeating it, it is unnecessary to quote it here.—*Müller's Archiv.* No. 2. 1847.

II.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

154.—Drs Von Bibra and Geist *on Necrosis of the Jaws, caused by the Vapours of Phosphorus.*—In the manufactories of lucifer matches the disease is most common among the dippers, who are more exposed to the fumes of phosphorus, which, as the fused composition is poured on the slab before them, are evolved in great quantities immediately under their nostrils. The process of counting and packing also causes a considerable evolution of phosphorus fumes, and in Nürnberg the counters and packers are affected like the dippers.

Toothache invariably precedes the more severe affection, and the patient attributes to his carious teeth, symptoms which are often the sign of a deeper malady. In all the patients attacked, however, caries of the teeth was previously observed, and so long as the teeth remain sound the affection does not show itself. The toothache may intermit and recur for a considerable period; the work is continued; and the person remaining exposed to the exciting cause, finds the pain gradually become more constant. It spreads over the whole affected side of the face; the cervical glands swell, and the cheek becomes tumid, red, and tense. The gums of the corresponding alveolar process inflame, an abscess forms, which now discharges fetid pus into the cavity of the mouth; and a sinus being once established, the livid gums retract more and more from the jaw-bone, the remaining teeth become loose and fall out, and more sinuses and abscesses form, through which the probe reaches the bone. In the same manner abscesses may also form externally, and the diseased portion of the bone will now soon appear to have become totally detached from the other portions, and will force its way into the mouth. The disease may terminate in this exfoliation; but if the strength of the patient does not suffice to carry him through, the soft parts become still further involved, and the ravages extend until death terminates the scene.

The constitutional disturbance bears a direct ratio to the extent and stage of the local malady. At first there is but little fever; but there are loss of appetite, thirst, and derangement of the alvine functions, constipation being the most prevailing symptom. The gastric derangement may increase; but this, as well as the febrile symptoms, may disappear, so that there is no constant type or expression of the general sympathy of the system peculiar to this disease.

The head disorders proceed differently, according as the upper or lower jaw is attacked. New bone is thrown out, at first in a fluid state, which, following the law of gravitation, accumulates towards the lower part of the under jaw. In the upper jaw no new substance appears to be ever formed after the bone has become denuded. The superficial portion is invariably of a dingy blackish colour, the lamina vitrea is destroyed, and the spongy substance of the alveolar process is ex-

posed. The bone appears rough, angular, sharp pointed, extremely irregular, as if it were carious; it is filled with ichorous pus, and, as this is discharged, small particles of bone escape, which give the pus a gritty appearance.

A minute examination of the new bony formation, exhibits the Haversian canals with a larger diameter than those of normal bone. They are empty, and placed at right angles with the general direction of the bone. They interfere with one another, sometimes expanding to form sacs, sometimes contracting, and end with open mouths on the surface, which are more minute in recent deposit, and larger in older layers. The bone corpuscles are rounded off or angular, and their circumference is less decided; during the progress of the formation of the deposit, they are very large, and their contour proportionably undefined. They appear pitted and dark-coloured; at first they are lighter, and they have ramifications like those of normal bone, which increase in number with the age of the deposit. This deposit is laminated, and exhibits rents with which the ramifications of the corpuscles are connected. Spots caused by accumulations of earthy matter are visible here and there.

A chemical analysis of the new deposits in several cases, shows that they contain a larger amount of organic, and a less amount of inorganic, constituents than healthy bone.

As regards treatment, antiphlogistic remedies are necessary at first; afterwards the system should be supported, and exfoliation favoured as much as possible. Surgical interference is useless. The preventive measures consist of good ventilation throughout the manufactories, not taking food in the workshops, and washing the hands night and morning in soda.—*Die Krankheiten der Arbeiter in den Phosphorzündholz-Fabriken. Condensed from Brit. and For. Med. Chir. Review.* April 1848.

[The original work is accompanied by beautiful coloured plates of the disease in the jaws, with drawings of the minute structure of the new osseous texture in various cases. It exhibits the great value of cultivating morbid anatomy and pathology on the basis of rational medicine, and may be considered a model for the production of monographs on individual diseases].

155.—*Ulceration of the Vermiform Appendage of the Cæcum.* By Mr Dumville.—Patient æt. twenty-four, male; had always been delicate; he was seized with diarrhœa eighteen months before his death; this continued for six months; after the cessation of the diarrhœa he had occasional pains in the abdomen and back. Four days before his death, he was seized suddenly with pain in the right iliac fossa; this became greatly aggravated two days afterwards, and accompanied with symptoms of urgent peritonitis, under which he sank. The cæcum exhibited intense peritoneal inflammation, caused by fœcal matter which had escaped through a sloughing ulcer in the vermiform appendage.—*Report of Manchester Pathological Soc. in Dublin Med. Press,* Mar. 15. 1848.

156.—*Abscess of the Pancreas.* By Dr Fletcher.—The appearance was that of a man much addicted to eating and drinking; he was corpulent, complained of pain about the epigastrium, and distension after eating, with continual dull pain extending across the belly; he had obstinate constipation. The urgent symptoms in the case were vomiting and pain, which, together with the constipation, led to the suspicion that some obstruction existed. He became emaciated, and died hectic eight months after Dr Fletcher first saw him. On dissection, liver enlarged, much congested, and having the nutmeg appearance; spleen healthy; pancreas large and degenerated into a purulent mass, having none of its healthy structure left; the large extremity had ulcerated into the duodenum at its inferior curve, through which the pus must have passed into the intestines; the stomach was much distended; intestines healthy, except the perforation alluded to; contents of the pelvis healthy.—*Provincial Medical and Surgical Journal.*

157.—*Phosphatic Deposits in the Urine of Children.* By Mr Grantham.—The author has recently attended three children, in one family, whose parents had previously lost other three children.

The general appearance of his patients presented a lax condition of the muscular system, with fair complexion, unequal diffusion of heat, dark eyes, indisposition to exertion, and constipation. They complained of weary and painful sensations in the parts supplied by the lumbar plexus. On examination of the urine, which was of a pale straw colour, having a specific gravity of 1·020, and exhibiting no deposit after standing, an undue proportion of the mixed phosphates was found in the urina sanguinis, but not in the urina potus. The treatment consisted in abstinence from sugar, fruit, &c., the tepid

bath, flannel clothing, and the exhibition of the nitro-muriatic acid, followed by steel.—*Medical Gazette*, Dec. 17, 1847.

[The above cases are worthy of notice, on account of the comparative rarity of phosphatic deposits in the urine before the age of puberty. The report, however, is not altogether satisfactory; the ages of the children should have been mentioned, and also the length of time during which the phosphatic impregnation was observed.]

III.—PRACTICE OF MEDICINE.

158.—HEBRA *on Skin Diseases.*—(*Continued from* p. 66.)

THE 6TH CLASS, HYPERTROPHIES.

Each organ may be so affected. Hence the various divisions:—

A. *Hypertrophia epidermidis.*

a. Without affection of the papillæ.

1. *Tyloma.*—Horny plates seated on the surface of the skin.

2. *Clavus.*—Plates entering into and branching in the epidermis.

3. *Lichen pilaris.*—Caused by the twisting and contortion of the hairs in their endeavours to reach the surface through hardened epidermis. The resulting papillæ resemble the skin in colour. Treatment—Baths and oleaginous inunction.

b With hypertrophy of the papillæ.

4. *Pityriasis.*—The first grade of

5. *Ichthyosis*—Formed by a want of due relation between the production and scaling off of the epidermis.

6. *Veruca.*

7. *Nævus verucosus.*

B. *Hypertrophia pigmenti.*

a. Without desquamation of the epidermis.

1. *Lentigo*—But a stain around a follicle.

2. *Chloasma*—The same, but larger.

3. *Melasma*—The same, darker, from a greater amount of pigment.

4. *Nævus spilus.*—Congenital abnormal coloration of the skin.

b. With simultaneous desquamation of the epidermis.

5. *Pityriasis versicolor.*—The chief remedy is washing with a solution of borax, ʒ i to ʒ vj of water; or corrosive sublimate.

6. *Pityriasis nigra.*

C. *Hypertrophia corii.*

Elephantiasis.

D. *Hypertrophia folliculorum.*

The hypertrophied follicles form firm white semicircular elevations above the surface of the skin. Condylomata may probably be included here.

E. *Hypertrophia partium cuti adnexarum.*

1. *Trichaura.*—Hypertrophy of the hair bulbs.

2. *Polytrychia.*—Over numerous hair follicles.

3. *Dermatokeras.*—A thorn-like projection of single hairs, which yet remained within the follicles.

4. *Polynychia.*

5. *Onychauxes seu gryphosis.*

7TH CLASS, ATROPHIÆ.

A. *Atrophia epidermidis.*

Hebra, under this head, includes excoriations, and distinguishes three grades:—

1. Slight ruffling of the epidermis.

2. Epidermis forcibly removed; exudation of plasma, forming a yellow, or clear brown crust.

3. The corion also being injured, blood becomes mingled with the plasma, colouring the crusts dark brown.

The author remarks that Hebra has been falsely led to include excoriation under this head by the use of the German expression, "Massenverminderung,"—diminution of volume; for, although atrophy be indeed such, it is generally held to include only those cases arising from imperfect nourishment, and not those caused by injury.

B. *Atrophia pigmenti.*

Leucopathia.

C. *Atrophia cutis.*

A consequence of many skin diseases; *e. g.* the scars after *Favus.*

D. *Atrophia folliculorum.*

E. *Atrophia cuti adnexarum partium.*

a. Pilorum.

α. Pigmenti pilorum.

1. *Poliosis.*

β. Atrophia pilorum ipsorum.

2. *Alopœcia* (var. *senilis, præmatura, circumscripta et syphilitica.*

b Unguium.

1. *Onychatrophia.*

THE 8TH CLASS, NEOPLASMATA.

A. *Epidermidis.*

Isolated condylomata and carcinomatous vegetations.

B. *Fibrarum telæ cellulosæ.*

1. *Molluscum simplex.*—Uniform swellings without contents on the back and hairy scalp.

2. *Acne rosacea.*—First, formation of new vessels; on the ends of these vessels papulæ form, which increase in size,

and may assume a proboscis-like form; occur in cases of habitual congestion, particularly in drunkards. Treatment—Altered mode of life, and washing with a solution of alum or tannin, 15 gr. to ʒ vj.

C. *Fibrarum telæ fibrosæ.*

1. *Cicatrices.*

2. *Cheloidea.*—A cicatrice-like production, without previous injury; usually of an oval or square form, with numerous extensions and superficial vessels. Occasional passing pain is present.

3. *Callus*—recently frequently observed in prosectors, commencing with follicular inflammation (furunculus); a small crust is formed, and in consequence of frequent soiling during dissection, epidermic and corial vegetations are formed, under which plasma becomes collected, sometimes purulent. These formations may attain the size of half-a-crown, and one or two lines in height, and are accompanied by violent pain.

D. *Telæ Adiposæ.*

1. *Lipoma.*

2. *Nævus lipomatodes.*

E. *Teleangiectasies.* Readily degenerate to *Fungus hæmatodes.*

a. Congenital—*Nævus vascularis.*

b. Acquired.

1. *Frambœsia.*

2. *Vegetationes syphiliticæ*, vascular and cellular new formations.

3. The first stage of *Acne rosacea.*

F. *Cholesteatoma*—The yellow brown surface of many sores.

G. *Osteoids*—Production of bone in the skin.

H. *Melanosis*—Deposition in the corion of the peculiar black pigment of the choroid and lungs; such melanotic parts readily degenerate to carcinoma.

The 9th Class, Pseudoplasmata.

1. *Carcinoma.*

2. *Tuberculosis cutis.*—A white spongy papula becomes developed in the follicle, the skin is perforated, a sanious fluid trickles out; the tubercular mass is situated at the base of the follicle.

The 10th Class, Ulcera cutanea.

A. *Ulcera idiopathica.*

1. Arising from scratching, *Ulcera psorica, impetiginosa*, &c. &c.

2. As a consequence of chronic dermatitis, also following erisypelas, furunculi, &c.

3. As a consequence of the capillary stasis caused by insufficiency of the venous valves. *Ulcera varicosa, arthritica, physconica.*

4. *Ulcera syphilitica primaria.*

B. *Ulcera symptomatica seu dyscrasica.*

1. *Syphilitica secundaria.*

2. *Scrophulosa.*

3. *Scorbutica.*

4. *Canceratica.*

The 11th Class, Parasitæ.

A. *Dermatophytæ.*

1. *Favus*—A yellow crumbly mass, projecting above the cutis, with a peculiar smell of mouldy bread, not seated in the skin (after removal depression is visible), the sanious, and afterwards purulent collection beneath it, and the absence of vesicles or pustules, all form certain marks to diagnose it from *Tinea.* The disease arises from diet, and from no dyscrasia, and is not contagious.

Hebra cannot yet recognise the vegetable character of *Alopœcia circumscripta* nor *Mentagraphita.*

B. *Dermatozoa.*

1. *Pediculi.*

a. *Humani capitis*—Always combined with *Achores.*

b. *Humani corporis*—Excoriation over the whole body.

c. *Humani pubis*—Produce a papular eruption.

2. *Acarus folliculorum*—Found on every dead body on the skin behind the ear.

3. *Sarcoptes hominis.*—(*To be concluded in next Number.*)

159.—*Diseased Conditions of the Mitral Valve.*—Incompetency of this valve is generally accompanied by narrowing of the auriculo-ventricular orifice. The valvular lesion under consideration is not unfrequently accompanied by a pseudo-chlorotic state, distinguishable from true chlorosis by the concomitant enlargement of the spleen. In these cases the patients complain of pains in the shoulders, which, according to Jaksch, persist until the system is improved by the use of chalybeates. Jaksch mentions the cases of three individuals who, from early youth, had laboured under this affection of the valves, and in whom the phthisical constitution ultimately became developed. He attempts to explain the presumed connexion between these diseases, by supposing defective nutrition, owing to the imperfect manner in which blood is propelled through the aorta.—*Hannoversche Annalen*, 1847. *Clinical Notes taken in the Hospital of Prague.*

160.—*Diseased Conditions of the Aortic Valves.*—Incompetency of these valves is constantly attended by large arterial pulsation. In simple contraction of the aortic orifice again, while the systole of the heart is of longer duration than in the former case, the pulse is almost always small and filiform. When the heart's action, however, is sufficiently slow to

allow a tolerably ample current of blood to flow through the contracted orifice, the pulse may be fuller.—*Ibid.*

161.—*Pericarditis.*—It is important to notice that the pains accompanying chest diseases are often referred by the patient to situations inferior, in point of position, to those organs actually affected. This accounts for the frequency of liver affection as a clinical disease, and the rarity of its detection on post-mortem examination. The pains of pericarditis are mostly referred to the scrobiculus cordis or hypochondrium. In one case where Jaksch, misled by these symptoms, diagnosed inflammation of the diaphragm, copious pericarditic effusion was found after death.—*Ibid.*

162.—*Endocarditis.*—Depositions in the spleen almost always accompany endocarditis, and these correspond in character with the endocardial exudations, being purulent if the latter are purulent, and so on. Jaksch states, that the endocarditis following acute rheumatism, very frequently gives rise to pyæmia. That the formation of aneurism may sometimes be induced, when the texture of the heart has been weakened by carditis or endocarditis, appears evident from the details of a case, in which inflammatory exudation on the lining membrane of this organ co-existed with inflammatory softening of its whole structure at the apex, and in which, at this point, a considerable degree of attenuation had taken place, which might no doubt, after some time, have gone on to rupture.—*Ibid.*

163.—*Perforating Ulcer of the Stomach.*—Of the patients labouring under this disease, noticed by Jaksch, 33 had acute tubercle of the lungs, 26 chronic tubercle of the lungs, and 43 pneumonia. He therefore presumes that some relation exists between the affection in question and diseases of the lung. The same physician gives the following sketch of the symptoms commonly observed with this kind of ulceration. After intense mental or bodily exertion, or the use of some stimulating liquor or article of food, the patient complains of violent pain, extending upwards from the pit of the stomach, which often disappears after vomiting. The tongue still remains clean, the appetite is variously altered, and the bowels are for the most part obstinately costive. Sometimes the symptoms assume more of the character of those which accompany mucous gastritis. There is a dull, persistent pain in the epigastrium, pyrosis, indigestion, vomiting, and tumefaction of the abdomen. Jaksch, in speaking of the treatment of these cases, recommends the use of milk, veal soup, and chicken soup as articles of diet. He also recommends, as palliative remedies, leeching and counter-irritation of the epigastric region, anodynes, the acetate of lead, and iron.—*Ibid.*

164.—Dr HUGHES BENNETT *on the Treatment of Phthisis Pulmonalis by Cod Liver Oil.*—The effect of the oil in many cases of phthisis is very striking, and is well seen in hospital and dispensary practice. Individuals presenting emaciation, profuse sweats, constant cough and expectoration, as most prominent symptoms, with a degree of weakness that prevents their standing alone, after a few weeks' use of it are enabled to get up with ease and walk about, with a visible improvement in their general health, and an increased amount of flesh. The physical signs of the disease may continue unaffected for some time; but if the treatment be continued, the moist gurgling râles are exchanged for dry blowing sounds, which become more and more persistent, pectoriloquy is merged into bronchophony, the respiration is easier, and a check is evidently given to the ulcerative process, and the formation of purulent matter in the air passages. In this state, patients often feel themselves so well that they insist on leaving the hospital, or give up their attendance on the dispensary. Dr Bennett has frequently found it impossible to prevail on such persons to continue the treatment, and the consequence is, that, again returning to their often unhealthy employment and bad diet, and exposed to the other causes favourable to the production of the disease, the distressing symptoms again recur. Several cases, with one or more caverns in the lungs, have in this manner returned to the Infirmary from four to seven or eight times during the last six years, and on each occasion have gone out in their own opinion perfectly cured.

Notwithstanding the difficulties which have presented themselves in bringing about a complete cure of the disease, Dr Bennett has succeeded, in several cases, in ascertaining that caverns have completely healed up, every symptom and physical sign indicating their presence having disappeared, and only slight dulness on percussion, and increased vocal resonance remaining as a proof of the puckering and induration of the pulmonary parenchyma attendant on the cicatrix. He gives two unequivocal cases where this occurred, and alludes to others which he purposes publishing at some future time.

Most cases of phthisis pulmonalis, especially in the advanced stage, are affected with more or less dyspepsia, which renders the stomach irritable, causes total loss of appetite, and is often the cause that prevents nourishment from being taken. In many instances there is no difficulty in employing the oil under these circumstances, but in others it cannot be retained on the stomach. It will then be necessary to calm the irritability of the organ, and the best remedy for this purpose, according to Dr B.'s experience, is naphtha. It is to the power this substance possesses of checking vomiting, and thereby allowing nourishment to be retained, that he attributes the advantages which have attended its use in the practice of Dr J. Hastings, and others. The diet should always be nutritive, without being stimulating; and counter-irritation to the chest is an excellent auxiliary. This treatment should be perseveringly persisted in; whilst, to prevent fresh exudations of tubercular matter, an equable temperature is of the highest importance. To equable temperature must be ascribed the advantages of favoured localities for phthisis, and with proper precautions it can be very well maintained in this climate.—*Bennett on Cod Liver Oil.* Edinburgh, 1848.

IV.—PRACTICE OF SURGERY.

165.—*Two Successful Cases of Galvano-Puncture in Popliteal Aneurism.* —A sailor, who had already been cured of a popliteal aneurism of the left side by a strict observance of Valsalva's treatment, was admitted into hospital on account of a similar tumour in the right popliteal space, the size of which is not mentioned. On the 19th of November 1846, Dr Palmer employed the galvano-puncture in the following manner: —A tourniquet being placed on the femoral artery, four needles, two and a half inches in length, were introduced into the tumour, two above and two below, at the distance of an inch from each other. During the operation, the direction of the currents was three times altered by changing the relation of the poles. The galvanism was continued altogether for thirty-five minutes. An immediate diminution in size, and nearly total disappearance of pulsation, resulted. Ecchymosis, and subsequently sloughing of the integuments, occurred. During the second week after the operation, fetid purulent matter escaped from the punctures—pulsation had entirely disappeared. On the eighteenth day a quantity of dark grumous blood escaped from the same openings, the sac was entirely emptied, and cicatrization gradually took place. Apparently, however, before the wound was healed, upwards of two months after the operation, the patient died of phthisis. On dissection, all that remained of the popliteal tumour was a sac of the size of a hazel-nut, containing a solid whitish yellow clot; the arterial trunk, with the vein which closely adhered to its coats, being obliterated for a short way above and below the tumour. On the left side all traces of the aneurismal tumour had disappeared, the artery being obliterated from two inches above the division of the femoral into deep and superficial, to the ankle.

The second case reported is that of a man twenty-eight years of age, in whom the aneurism had existed for a year before the application of the galvanism in May 1847. The same method was adopted by Dr Lisio as in the above case. The pain, however, was so acute, and the patient so intractable, that the action of the galvanism could be maintained only for twenty-three minutes. As the current was continued, the tumour became red, increased in heat, hard and painful, but it at the same time sensibly diminished in size, and pulsation became more and more feeble. For a short time pulsation had almost entirely ceased, but in about a fortnight it again increased. It then disappeared entirely and reappeared alternately for some time. The tumour, however, continued to shrink in size. At the end of twenty-seven days the patient left the hospital. In the month of August the tumour had almost quite disappeared, but pulsation was distinctly felt in two different points, corresponding apparently to the situations of the popliteal artery and an enlarged collateral branch.—*Annali Universali di Medicina* Jan. 1848, and *L'Union Médicale*, March 7, 1848.

166.—*Operation for Strangulated Umbilical Hernia.* By Mr G. B. Childs. —In a discussion which ensued at the Medico-Chirurgical Society (Feb. 23), a plan proposed by Mr Gay was spoken of, in which the object of the operator is to get at the stricture without at all exposing the hernial tumour. The following

operation has since been performed by Mr Childs, in which Mr Gay's proposal was followed.

The hernial tumour, which was of two years' standing, had become strangulated on the evening of the 7th of March. It was at least eight inches in its longest diameter; lay principally to the left of the umbilicus, on the abdominal parietes, which it depressed to a depth that made the distance between them and the integuments very considerable; and obviously consisted of a large mass of omentum as well as intestine. An operation for its relief was immediately required, and that proposed by Mr Gay adopted, on the grounds that, from its great size, the corpulency of the patient, and the extent of wound necessary for its performance in the ordinary way, hardly any but a fatal result could be anticipated from it.

The patient was first placed under the influence of chloroform, and then a wound through the integuments and superficial fascia, not more than an inch in length, was made on the right side, just beyond the edge of the hernial mass. The finger was directed through the wound, and after separating some few bands of cellular and other tissues, which feebly obstructed its course, the neck of the sac was reached at a depth of at least four inches. The umbilical ring forming the stricture, was then felt constricting the neck of the sac, to which it was adherent, by means of some strong bands. These were broken down with the finger, but not without some difficulty, owing to the great quantity of fat, and consequent depth of the wound. A director was then insinuated between the sac and the ring, guided by the finger, which still remained in the wound, and the stricture divided. After breaking down some further adhesions, the parts were liberated, and the contents of the sac immediately returned. The patient had her usual truss applied at once, and no bad symptoms occurred to prevent her complete recovery.

The usual fatality attending operations for umbilical hernia, would, in the prognosis of the present case, have excited grave doubts as to the result had the old operation been adopted; and Mr C. thinks that the simplicity of the principle upon which the new operation is based, the little difficulty in ordinary cases of practising it, and the lessened probability of its being followed by any severe symptoms, form very decided arguments in its favour.—*Lancet*, March 18, 1848.

167.—*Venereal Ulcers on the Tongue.* By the late JOHN PEARSON, Esq.—According to Mr Pearson, these are by no means common in syphilitic diseases. This morbid alteration begins rather beyond the middle of the tongue, in the direction of the central line. It appears first as a soft tubercle, and enlarges in length towards the base of the tongue. The edges have a sort of mulberry appearance, and the ulcer discharges an offensive matter. Sometimes the edges of the tongue, the uvula, or arches of the palate, have an excoriating or aphthous appearance. These symptoms sometimes occur without any other venereal symptom, but they are more commonly associated with blotches on the skin.

At other times there will be an ulcer on the side of the tongue, with callous irregular edges, accompanied with sore throat, or a sore on the tip of the tongue, with smooth callous edges, very painful, especially during the night; or there may be tubercles on the side of the tongue, resembling those which appear on the inside of the thighs and scrotum, when they excoriate each other.—*Provincial Medical and Surgical Journal*, No 6, 1848.

168.—*On Spermatic Discharges.* By B. PHILLIPS, F.R.S.—Mr Phillips has on several occasions addressed communications on this subject to the *Medical Gazette*, in which he advocates the use, in some cases, of caustic applied to the surface of the urethra, as advised by Lallemand. He has now, however, from the experience of a much larger number of cases, formed the opinion that this measure is generally not required. When these discharges are not the result of a continued habit of masturbation, or of any accidental cause of irritation,—*i. e.* when they are strictly involuntary,—he has found them rarely to persist beyond the age of twenty-five, and even when much more frequent than usual, he does not consider them likely to be productive of serious consequences. The evils complained of by patients are generally in great part imaginary, and have reference more to the dread of future consequences than to any present physical disorders. The proper cure is to be found in moderate sexual intercourse, and, where this cannot be recommended with propriety, Mr Phillips thinks that the great majority of cases will undergo a spontaneous cure after a time, and that in the mean time the continuance of the discharges is not likely to be fraught with any bad consequences. It is often difficult to convince the patient of this; but it is highly necessary to do so, in order to get rid of the

bad effects which occur in such cases from despondency. The use of tonics and stimulants, and indeed of medicinal agents generally, is deprecated by Mr Phillips on the ground that it tends to excite expectations of rapid cure, which will probably be disappointed, and thus give rise to increased mental depression.

The use of caustic is generally restricted by him to those cases in which the mucous membrane of the urethra is the seat of increased sensibility or chronic discharge, indicating a diseased condition independent of the seminal discharges; he considers it, however, a perfectly safe application. Finally, in cases where the habit of masturbation is kept up, no treatment, not even that by caustic, will be of the least avail until it is abandoned; and it is better that such patients should not submit to treatment, till they have succeeded in curing the habit which is the source of the disease. — *Medical Gazette*, March 24, 1848.

169.—*Tincture of Iodine as a Collyrium for promoting Absorption of Hypopion.* By Dr Rivaud Landrau of Lyons.—Dr Landrau has obtained good results from the use of tincture of iodine in the internal ophthalmias, accompanied with effusion of purulent matter into the anterior chamber. By means of dropping into the eye an iodureted collyrium, he has succeeded in promoting the absorption of obstinate hypopions. He orders the eye to be bathed three times a-day, with a collyrium composed of twelve drops of the tincture of iodine in seventy grammes (2½ oz.) of distilled water. In five cases of acute ophthalmia, with iritis and purulent effusion into the anterior chamber, which the author relates, this collyrium, employed after having first subdued the inflammation by means of a strict antiphlogistic treatment, caused a rapid absorption.—*Journal de Médecine de Lyon*, in *Annales d'Oculistique*, January 1848.

170.—*Congenital Blindness in Nine Children of the same Family.* By M. Pauli.—Rodolph Médian and his wife, both rather more than fifty years of age, and always enjoying good health, have had nine children who were born blind. The ancestors of these unfortunates had all good sight, as far as could be recollected, except the maternal grandfather, who became blind at an advanced age; it was impossible to learn any thing positively as to the nature and cause of his blindness.

The father Médian has black hair; the mother is fair; five children, who have the hair dark and the irides brown, are affected with amaurosis. The other four, who have fair hair and blue irides, and also amaurotic to a slight degree, have a milky cataract. Three of these blind children are daughters, two of whom are fair and one dark; of the six boys, two are fair, the others have the hair almost black. All the nine are healthy, and of a good constitution.—*Clinique de Montpelier*, in *Annales d'Oculistique*, January 1848.

V.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

171.—*On Turning as an Alternative for Craniotomy and the Long Forceps in Deformity of the Brim of the Pelvis, &c.* By Professor Simpson.—In January 1847, Dr Simpson brought this subject under the consideration of the Obstetric Society of Edinburgh, and we gave an abstract of his opinions on this important practical question, and the details of a case of its employment in our Number for March 1847, p. 718. In a paper published in the July Number of this *Journal*, Dr Simpson again briefly discussed and stated the principles of the practice. In a series of seven or eight essays, published in the *Provincial Medical and Surgical Journal* during the past and present year, Dr Simpson has treated the subject at full length and in all its bearings. On the present occasion we will notice merely some of the points and propositions which Dr Simpson has considered.

We may premise, that when, in contracted pelvis, craniotomy or the long forceps are used, the contraction is almost always at the brim; and in the conjugate diameter of the brim from the projection forwards of the promontory of the sacrum. It is in such cases Dr Simpson proposes to substitute turning for craniotomy and the long forceps.

The great objects and advantages of the practice, Dr Simpson states to be "the substitution of the extraction of the infant by the feet for its extraction by the crotchet; the delivery of it by the *hand* of the accoucheur instead of its delivery by *instruments*; the *lateral* compression of the child's head by the contracted sides of the pelvis, instead of its more dangerous *oblique* or longitudinal compression by the long forceps; and, above all, the transient and not necessarily fatal *depression* of the flexible skull of

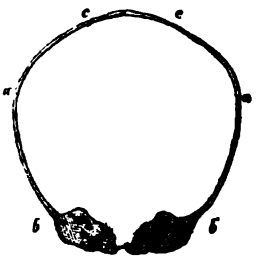
the fœtus for the destructive and necessarily deadly *perforation* of it."

In a chapter devoted to the statement of the "Evidence suggestive of the Practice," Dr Simpson shows, by a variety of illustrative cases extracted from Dr Smellie, Dr Lee, &c., that in some cases of deformed pelvis the labour has proved both easier and safer when the child happened to present and pass footling, than when, in other labours in the same mothers, the head of the fœtus happened to form the presenting part; and that occasionally, when in all previous labours the child had been sacrificed when it presented by the head, a living infant had at last been born when it chanced to come down and pass through the contracted pelvis as an original footling presentation. From these facts, Dr Simpson argues, that in some distorted pelves the passage of the child by the feet or pelvic extremity affords to it and the mother some special facility of transit. Upon what, in such cases, does this greater facility and safety of footling, as compared with head presentations depend?

In a chapter on the "Theory or Principles of the Proposed Practice," Dr Simpson enters at length into the solution of this last problem. Our space obliges us to content ourselves with giving the conclusions only, at which he arrives. For the details we must refer to the original paper. He shows, that in the usual form of contracted pelvic brim, requiring embryulsio or the long forceps, when the child passes as a footling instead of as a head presentation, it may escape with life and be delivered more easily, in consequence of the mechanism of the footling labour being more favourable and advantageous, chiefly on the following grounds:—

1. The fœtal cranium is, vertically, of a *conical* form, enlarging from below upwards, its bimastoid diameter (*b b*) being

Fig. 1. *Vertical section of fœtal skull, showing its conical form.*



usually from half an inch to three quarters of an inch less than its biparietal diameter (*a a*); and hence, when the child passes as a footling presentation, the lower and narrower part of the cone-shaped head is generally quite small enough to enter and engage in the contracted pelvic brim.

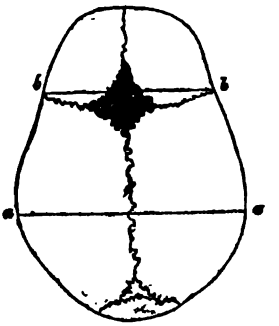
2. The hold which we have of the protruded body of the child, after its extremities and trunk are born, gives us the power of employing so much extractive force and traction at the engaged fœtal head (E D F), as to make the elastic sides

Fig. 2. *Showing the compression and indentation of the fœtal cranium in a contracted brim.*

of the upper and broader portion of the cone,—namely, the biparietal diameter of the cranium—become compressed, and, if necessary, indented, between the opposite parts (A, B) of the contracted pelvic brim, to such a degree as to allow the transit of the entire volume of the head.

3. The fœtal cranium, besides being of a conical form when looked at vertically, shows also the same configuration when viewed antero-posteriorly, its bi-temporal (*b b*) being about half an inch narrower than its bi-parietal diameter (*a a*); and

Fig. . *Outline of the fœtal head as seen from above.*



when, in a footling presentation, the head

is dragged downwards into a distorted pelvis, it generally arranges itself or may be artificially adjusted so that its narrow bi-temporal diameter, instead of, as in head presentations, its broad bi-parietal diameter, becomes engaged, and passes through the contracted conjugate diameter of the pelvic brim.

4. The arch of the cranium is more readily compressed to the flattened form and size required for its passage through a contracted brim, by having the compressing power applied, as in footling presentations and extraction, directly to its sides or lateral surfaces, than by having it applied, as in cephalic presentations, partly to the lateral and partly to the upper surfaces of the arch.

5. Turning, instead of craniotomy, in distorted pelvis has this advantage; that, while it gives the child a chance of life, it adds also to the chances of recovery and safety of the mother; for, *cæteris paribus*, delivery by turning can be practised far earlier in the labour than would be at all considered justifiable for the destruction of the infant by perforation; and, as Dr Simpson shows, artificial delivery is always attended with greater danger to the mother, in proportion as it is performed at a greater distance of time from the commencement of labour.

In one of his subsequent chapters, Dr Simpson shows from the recorded experience of Velpeau, Chaussier, Smellie, Denman, Lachapelle, Duges, Jacquemier, &c., that, as he stated in our Journal in March and July last, the neck of the living child is so strong as to allow us to exert such a degree of traction upon the obstructed head, that the sides of the fœtal cranium may become not only greatly compressed, but even depressed or indented under it, without necessarily destroying the life of the child; and he cites a variety of cases and observations from the above authors in proof of this remark. From the various cases which Dr Simpson cites we will quote one (a case incidentally recorded by Dr Denman) as highly illustrative of the principles and advantages of this proposed change in the operative treatment of one of the most important classes of cases that are met with in midwifery practice. "Many years ago (observes Dr Denman) I attended a patient in two labours, in both of which there was a necessity of delivering with instruments, on account of the smallness and distortion of the pelvis, and neither of the children could be preserved. In her next pregnancy I made a proposal to bring on premature labour, to which she and her friends would not consent, and I was dismissed from my attendance. In the course of twelve or fourteen years she had five more children, not one of which was born living. In the forty-sixth year of her age she proved with child, and again applied to me. When her labour came on, the first stage was suffered to proceed without interruption, but when the membranes broke I without delay passed my hand into the uterus, and easily brought down the feet and body of the child; but the head being stopped by the narrowness of the superior aperture of the pelvis, I was obliged to exert, and continue much force, before it could be extracted. The child was born with very little or no appearance of life, but, by the strenuous use of the common means recommended for this purpose, it was recovered. On the left parietal bone there was a depression of considerable extent, and, to my apprehension, of full one inch in depth, occasioned by the projection of the sacrum, but the depressed part gradually rose. In the course of a few months the bone regained its natural form, and the child was for several years in good health, with its faculties perfect. The woman recovered without any untoward circumstances."

[Various old authors, besides Dr Denman, have recorded individual cases, like the above, of deformity of the pelvic brim, in which they extracted the child by turning; but the operation was followed with doubt, and rarely; because the *principles* of its advantages and mechanism were not seen or understood. In detecting and generalizing these principles, and in showing the possibility and safety of early substituting lateral compression, and, if necessary, depression of the infant's head for the long-delayed perforation of it, and inevitable death of the child, Dr Simpson will probably produce a happy revolution in the treatment of this important class of cases. We will revert to other points in a future Number.]—*Provincial Medical and Surgical Journal*, 1847-8.

172.—*Extra-Uterine Fœtation.* By Dr Duckert, Van Deen, M. Payan and Mr Hyde.—A strong woman, thirty years old, had already borne three children without aid. In the eighth month of her fourth pregnancy she was tossed in the air by an ox. After this supervened all the symptoms of rupture of the uterus. Three weeks after the accident an abscess formed below the navel, which burst of itself, and gave issue to matter, along with parts of the fœtus and placenta. In about five weeks the abscess healed up, and she

was able to leave her bed.—*Schmidt's Jahrbuecher* 1847, No. 12, p. 328.

Van Deen's patient, on arriving at the fourth month of pregnancy, was seized with acute peritonitis, from which she recovered. At the period of her expected accouchement she felt violent motions of the child, and had at the same time a bloody discharge from the vagina, which lasted for three days. On the third day her breasts became turgid, and she experienced the ordinary milk fever. Subsequently, she recovered completely; her menses flowed regularly, and she bore two children. Six years after the ventral pregnancy and retention of the fœtus above described, she died of a violent attack of peritonitis. On the autopsy the almost mature fœtus was found lying in a cyst between the bladder and uterus. In some places its soft parts had disappeared, and in others become encrusted with calcareous matter. It was also partly broken up, some of the bones having escaped through ulcerated openings into the intestine.—*Viertel-jahrschrift für Prakt. Heilkunde*, II. Bd. 1847.

Mr Hyde's patient was seized (without apparent cause) with symptoms of violent peritonitis, which subsided under treatment, and some time after which an abdominal tumour was discovered, which increased gradually, and was in due time ascertained to contain a fœtus; the uterus being found undeveloped. At the close of the ninth month of gestation, pains supervened, but soon again disappeared. She died about two months afterwards; and, on the *post-mortem* examination, the fœtus was found in the abdominal cavity in a state of decomposition. In the middle half of the Fallopian tube was found an ulcerated opening, through which the ovum had probably escaped into the abdominal cavity, and caused the peritonitis at a very early stage of pregnancy.—*British Record of Obs. Med.*, p. 68.

Dr Payan's case was that of a woman, æt. thirty-two, three months advanced in pregnancy. Suddenly, and without apparent cause, she was taken with violent pain in the hypogastrium, burning thirst, and feelings of great depression. She was then seized with faintings, in one of which she died, about ten hours after the commencement of the symptoms.

On opening the body, a large quantity of coagulated blood was found covering the uterus, which was somewhat enlarged, and presented at its upper part a prominent tumour, transparent in some parts, and in which was found the embryo. The cavity itself of the womb was a little enlarged, and covered with a sort of imperfectly organized false membrane, which almost completely filled it. It did not contain a fœtus nor a single drop of blood.—*Archives Générales de Med.*, Feb. 1848, p. 257.

[Our readers who are interested in the subject of extra-uterine fœtation we would refer, for cases similar to the preceding, and for much valuable general information on the whole subject, to the excellent essay of Dr Campbell, entitled a Memoir on Extra-uterine Gestation.]

173.—*Kiestein in the Urine, a Test of Pregnancy.* By Dr GOLDING.—The chief advantage which this test of pregnancy might be expected to afford the obstetrician and medical jurist, lies in its being often available very soon after the commencement of gestation,—in some cases as early as the third or fourth week. It is generally allowed that, in most pregnant women, the urine, after it has stood twenty-four or thirty-six hours, presents on its surface a fatty iridescent pellicle, of a somewhat cheesy odour. The pellicle is very rarely observed after lactation has been commenced. There are, however, several sources of difficulty and uncertainty in applying this criterion in practice, which induce obstetricians to place very little confidence in it. For instance, our author points out that, sometimes, it is apparently absent during the whole period of pregnancy, or only during a part of it; and that sometimes it is so indistinct as to be with difficulty discovered, either from its quantity being extremely small, or from the coexistence with it of other matters, which obscure or destroy its characteristic mode of appearance.—*Brit. Record of Obstet. Medicine*, No. 7, &c.

174.—*Assafœtida in Morbid Pregnancy.* By Dr G. LAFERLA.—Considering debility and inertia of the uterus to be a frequent cause of the death of the fœtus, Dr L. proposes the use of assafœtida internally and in repeated doses, to restore to the uterus the necessary vigour and tonicity, without exciting it to contraction. At the same time he pays particular attention to the hygienic circumstances of the mother, and to this last is probably attributable his success in the cases that have fallen under his care.—*Révue Medico-Chir.*, 1847.

175.—*Maternal and Infantile Mortality in the Dublin Lying-in Hospital.* By Dr CLAY.—The Dublin Lying-in Hospital was founded by Dr Moss in 1757; from

that period down to 1847, it has been under the charge of fourteen different physicians, or masters, as they are termed, who generally have held this important and lucrative appointment for seven years each. The following table shows the number of women delivered during each mastership, and the proportion of mothers and of children lost under the charge of the different successive physicians of the hospital. The per-centages present, says Dr Clay, "an almost undeviating uniformity;" eighty or ninety years ago the mortality under the two first masters, Dr Moss and Sir Fielding Ould, being nearly precisely the same as since 1833 under the two last masters, Dr Kennedy and Dr Johnson.

Table of the Maternal and Infantile Mortality of the Dublin Lying-in Hospital under different Masters.

Name of Master.	Number of Deliveries.	Number of Mothers lost.	Number of Children lost.
Dr Moss, . .	915	14; or 1 in 65	46; or 1 in 20
Sir F. Ould, .	3,800	49; or 1 in 77	197; or 1 in 19
Dr Cullum, .	4,724	65; or 1 in 73	258; or 1 in 18
Dr Jebb, . .	5,903	63; or 1 in 93	269; or 1 in 22
Dr Rock, . .	7,088	54; or 1 in 131	411; or 1 in 17
Dr Clarke, .	10,787	124; or 1 in 87	580; or 1 in 19
Dr Evory, . .	11,357	86; or 1 in 132	600; or 1 in 19
Dr Kelly, . .	14,790	163; or 1 in 90	974; or 1 in 15
Dr Hopkins, .	18,727	217; or 1 in 86	1063; or 1 in 17
Dr Labatt, .	21,867	309; or 1 in 70	1535; or 1 in 14
Dr Pentland, .	12,885	198; or 1 in 65	827; or 1 in 15
Dr Collins, .	16,391	158; or 1 in 103	1017; or 1 in 16
Dr Kennedy, .	13,167	224; or 1 in 58	651; or 1 in 20
Dr Johnson, .	13,699	179; or 1 in 76	863; or 1 in 16
Total, . .	156,100	1903; or 1 in 81	9291; or 1 in 17

The 156,100 women delivered in the hospital have given birth to 82,267 boys, and 76,169 girls, or the proportion of male to female births has been as 12 to 11; twins occurred 2400 times, or in the proportion of 1 in 65 of the deliveries; there were thirty-two triplet cases, and one case of quadruplets.

In the Registrar-General's returns we have the proportion of maternal deaths in childbed in England and Wales published from 1839 to 1842. During these four years 2,024,774 women were delivered, and 11,598 of them died. Hence, the proportion of mothers dying in childbed during these years in England and Wales, was 1 in every 174 deliveries. It is, however, to be recollected, that always and every where the results of private practice are more favourable than those of hospital practice.—*British Record of Obstetric Medicine* for April 1848.

VI.—MATERIA MEDICA AND THERAPEUTICS.

176.—*Therapeutic Action of Cod Liver Oil.* By Dr Hughes Bennett.—Dr Bennett believes that the therapeutic action of the oil is dependent essentially on its being a fatty matter, perhaps more easily assimilated to the economy than any other kind of fat. He thinks the views of Ascherson fundamentally correct, with this difference, that instead of oil and albumen uniting to form elementary cells, they only produce elementary molecules and granules, from which nuclei and cells are formed. To him it seems certain, that in chronic rheumatism and tubercular diseases, the albuminous compounds are in excess, and the oily compounds are diminished in the economy. The direct addition of the latter, therefore, is the most rational method of supplying the wants of the system.

It may reasonably be argued, that if the theory of its action as fatty matter be correct, any other kind of oil would prove just as serviceable, and certainly there are many much more agreeable to the palate. Experience, however, has decided this question in the negative. The reason of this probably is, that continued doses of the purest vegetable oils, as that of the olive and almond, are more or less purgative, and thereby diminish, instead of improving the strength. It may also happen that the pungent properties of cod liver oil may have a favourable influence in retaining it on the stomach, and rendering it digestible. Lastly, it seems

reasonable that an animal oil should be much more easily assimilated to the system than a vegetable one.

Since the publication of Dr Bennett's work on cod liver oil, in 1841, the chemical views of Liebig and others have come into notice, and it is a remarkable fact that they perfectly harmonize with the histological and morphological theory therein advanced. For, whether we regard the oil as a carbonized principle of the food, as furnishing an element for respiration, or as necessary to the formation of elementary granules in a nutritive blastema, it seems equally fitted to serve the end in view.

That a purely chemical theory, however, is defective is proved by the fact, that *every* carbonized material is not fit for the purpose. We cannot produce an increased nutrition in rheumatic or phthisical constitutions by alcohol, sugar, or starch, notwithstanding their chemical composition is so similar. The chemists may argue that these are converted into fats; and in the physiological condition so they are. In a pathological condition, however, when the digestive powers are enfeebled, this does not take place; and, in giving an animal oil ready made, we save the alimentary organs the trouble, as it were, of doing this. Hence, in constitutions which cannot digest food, or convert it into the oily element, the introduction of cod liver oil, in large doses, causes the necessary principle easily to be imbibed into the lacteals, where, uniting with the albumen, it constitutes the elementary granules so necessary to nutrition.

It is on this account, that in every disease of a rheumatic or tubercular nature, attended with impairment of nutrition, emaciation, weakness, &c., cod liver oil is directly indicated. It operates by imparting to the system one of the great elements necessary for the nutrition of the animal economy, in cases where that element is essentially defective. In the hands of the rational practitioner, it is destined to be an important means of curing a class of diseases, hitherto considered of the most dangerous and fatal nature. As our knowledge of morbid processes improves, as the microscope and organic chemistry open up to us the primary alterations producing lesions of the body, the great importance of attending to the part played by the oily principle, as one of the essential elements of nutrition, will become apparent. Then, when pathology is made the companion of physiology, and both constitute the foundation for a rational system of therapeutics, the use of cod liver oil will be found as beautiful in theory as it has already been found benefical in practice. —*Bennett on Cod Liver Oil.* Edinburgh, 1848, 8vo.

177.—*Quinine in Intermittent Fever.* By M. BOUCHARDAT.—M. Bouchardat conceives that intermittent fevers may be usefully arranged under four forms or varieties, according to the intensity of the disease, and the corresponding effect of quinine on its course and duration. The *first form* includes those obstinate cases which require large doses (15 to 30 grs.) of quinine for their temporary cure, but in which, in spite of the methodical use of the remedy, the fever continues to recur for years. This variety is found in Italy, North of Africa, &c., and is contracted, according to Bouchardat, by a lengthened residence in the neighbourhood of marshes, the water of which contains sulpho-salts in solution. To the *second form* belong those cases which require, but may be effectually cured by large doses (15 to 25 grs.) of quinine. An intermittent of this kind prevails at Tours, and has been well described by M. Bretonneau, who observes that small doses are here insufficient. They habituate the patient to the action of quinine, irritate the stomach, and render it difficult to obtain the full action of large doses. The *third form* comprises those mild cases in which small doses (1 to 5 grs.) are sufficient, not only to arrest the fever, but also to prevent its return. Lastly, he includes in a *fourth form*, the numerous cases in which change of residence, or admission into hospital, is sufficient to remove the disease.—*Gazette Médicale de Paris*, January 1848.

[This classification of intermittents is certainly of considerable practical value, and serves to establish the principle, that the dissimilarity of action of the same remedy may indicate differences in diseases apparently identical occurring in distant parts of the globe. The cases of intermittent fever observed in Paris and Vienna, belong to the third and fourth forms of M. Bouchardat. Thus, the practice of Skoda of Vienna, which consists in giving three doses of quinine of two grains each, at intervals of an hour previous to the usual period of accession of the paroxysm, rarely fails to effect a cure in two or three days. On the second or third day he sometimes increases the third dose to four or six grains. The form of intermittent is, however, so mild, that we have repeatedly seen cases in other wards of the same

hospital recover without any treatment whatever. On the other hand, the experience of physicians in Italy, Africa, and some parts of North America, has shown that small doses of quinine are quite inefficient in the treatment of the intermittent fever prevalent in these parts of the world.]

178.—*Poisonous Properties and Therapeutic Action of the Sulphate of Quinine.* By Dr Baldwin.—In certain forms of intermittent fever, quinine, as mentioned above, requires to be exhibited in large doses. It is very important to know, however, that this heroic treatment can only be conducted safely within certain limits. Many, believing in the perfect harmlessness of the drug, have fearlessly administered doses varying from half a drachm to three drachms; but the observations of Dr Baldwin show that this practice is attended with danger, and, in one instance which came under his own eye, a much smaller dose occasioned death. Children present greatly less tolerance of the remedy than adults. In the fatal case, eight grains given in two doses, with an interval of three hours between each dose, to a child of six years, brought on dilatation of the pupils, extreme restlessness, convulsions, blindness, and death. In another case reported by Dr B., sixty-eight grains introduced into the system in the course of twenty hours, induced the train of symptoms characteristic of the poisonous action of this drug, viz. tremors, slow and irregular breathing, restlessness, dilatation of the pupils, blindness, and convulsions.

Several authors (Mérat and de Lens, Duval and Trousseau) mention cases in which serious effects have ensued from the immoderate use of quinine. Melier (Mém. de l'Acad. de Méd. tom. IX.) says, that the following effects have been distinctly observed to result from large doses of quinine in man; delirium and coma, pneumonic symptoms, hæmaturia, amaurosis, deafness, convulsions, paralysis, and death.

Startled by the serious results occasioned by the use of quinine in the cases above noted, Dr Baldwin commenced a series of experiments on animals with the view of determining its poisonous action. He found that the symptoms developed in animals by poisonous doses of quinine, were general restlessness, speedily followed by "muscular agitation, or tremulous movements of the body and extremities, with a constant motion of the head resembling somewhat paralysis agitans. When under the full operation of the poison, the power of locomotion, and even of standing in the erect position, was altogether lost, and the extremities apparently paralysed." Great excitement of the vascular system is said to have been present, the pulse rising to 110, and in some to 240 beats in the minute, accompanied with great oppression of breathing and frothing at the mouth. The pupils were much dilated, and, as far as could be judged, vision was entirely lost—convulsions were observed in every case but one. "In a few instances the subject seemed as if stunned by some sudden blow, or a violent fit of apoplexy; the latter effect was only observed when it was given to young dogs by the jugular vein or peritoneum." Purging was present in some cases, and when the medicine was given by the stomach, vomiting invariably ensued unless the œsophagus was tied.

The time required to produce death varied greatly; in some instances 15 to 20 grains proved fatal in a short period; while in other animals, on administration of 120 grains, death occurred only after a long period; peculiar idiosyncrasies—as in the human subject—appearing to favour or retard its action as a poison. The quinine was in some cases introduced into the stomach, in others injected into the peritoneum and into the jugular vein; its effects were equally exhibited by each mode of administration, but not with more certainty or force when given in one way than in another. The chief post-mortem appearances were "a dark, fluid, and defibrinated condition of the blood," a congested state of the lungs, and "a vascular and highly injected state of the stomach and bowels," and congestion of the vessels of the brain.

The results obtained in Dr Baldwin's experiments coincide with those obtained by others.—(*Melier, Mem. de l'Acad. de Méd.* tom. X. *Giacomini, Dict. de Méd.* Vol. XXVI.)

It appears, then, that both upon man and animals, sulphate of quinine may exercise decidedly deleterious effects, and the important question now arises,—In what dose are we justified in administering this important drug, which will secure to us its full therapeutic action, and yet not be so large as to produce its toxicological results? In estimating this, we must guard against being guided by the results of individual cases; for experience has distinctly shown, that a dose which one individual may take without inconvenience, may prove much too large, and even fatal,

to another. Thus, numerous cases are recorded where one and two, and even three drachm doses have been administered without producing very serious results; while, in a case recorded by Trousseau (*Traité de Thérapeutique*), forty-eight grains nearly proved fatal; and instances of individual susceptibility of this kind might easily be multiplied.

The question of the dose, according to Dr Baldwin, can only be answered by a careful examination of the diseases to which quinine is applicable, as he believes that in many of these a tolerance of the remedy exists, which requires, and will bear larger doses for their removal, than other forms of disease in which such tolerance does not exist.

In *intermittent, remittent,* and *continued* fevers, the system presents great tolerance of quinine, and in these diseases large (one to two drachm) doses may be prescribed without much probability of the production of its toxicological effects. At the same time it may happen that the prescriber of these large doses will meet occasionally with one of those peculiar idiosyncrasies in which not even the existence of one of these diseases can produce any great tolerance of quinine, and either death or most distressing symptoms may supervene. We are, therefore, not warranted in giving these large doses until a trial of smaller doses has shown their inefficiency. Dr Baldwin concludes, from extensive experience in the treatment of severe malarious fevers, that doses of ten to fifteen grains are sufficient in the vast majority of cases. A few may require more. (*See the Observations of Bouchardat,* quoted above.)

In *intermittent affections* and *periodic neuralgia,* the tolerance of quinine is much less than in the fevers, 3 to 6 grs. being the quantity required, and which is best borne.

In *acute rheumatism and hemorrhages* small doses are quite imperative, as no more tolerance exists than in a state of health, and serious, even fatal, consequences have followed its use in heroic doses.—*Southern Journal of Medicine and Pharmacy, America,* November 1847.

[In the practice of M. Briquet, who was the first in France to recommend the use of large doses (30 to 100 grains daily) of the sulphate of quinine in the treatment of *acute rheumatism,* several deaths occurred, which were distinctly attributable to the medicine employed.—*Trousseau, Traité de Thérapeutique.*]

179.—*Adansonia Digitata—a Substitute for the Sulphate of Quinine.*—M. Duchassaing was induced, in consequence of the high price of sulphate of quinine, to try the efficacy of the bark of this tree, the febrifuge properties of which had been indicated by Adanson, its discoverer, in the severe intermittent fever prevalent in Guadaloupe. Numerous trials justify him in strongly recommending the drug, which is cheap, and has moreover an agreeable taste. It succeeded in several cases where large doses of quinine had failed. An ounce of the bark, in the form of decoction, forms a sufficient dose.—*Gazette Médicale,* March, 1848.

180.—*Baths of Corrosive Sublimate in Chronic Affections of the Skin.* By M. DUCLOS.—The author of this paper relates several cases illustrative of the value of these baths in syphilitic diseases of the skin, in chronic eczema, and generally in all chronic non-febrile cutaneous affections of young children. For each bath the proportions recommended are, for an adult,

Corrosive sublimate, 3 drachms, 45 grs.
Alcohol, - - 2 oz.

for a child, Corrosive sublimate, 15 grs.
Alcohol, - 3 drachms.

The child's bath is directed to contain two and a quarter gallons of water. The duration of the bath is from half an hour to an hour, and it may be repeated every day, or only every second, third, or fourth day, according to circumstances.—*L'Union Médicale,* 18th January 1848.

[We have seen these baths extensively used at the hôpital Necker, Paris, both in adults and young children, and can assure the reader, that the fears, which the practice at first naturally excites, are groundless, proper precautions being taken to prevent the child swallowing any of the fluid. They occasion heat and prickling of the surface, and a cutaneous eruption of a lichenoid character is frequently produced. A few patients, especially after a long bath, have displayed unusual drowsiness. They form the most efficacious treatment with which we are acquainted, for the syphilitic diseases of the skin of young children, ten to twenty baths being generally sufficient to obtain a cure. In chronic non-febrile rheumatism, Professor Trousseau has found them often of great service.]

181.—*Modus Operandi of Alum.* By M. MIALHE.—Alum belongs to the class of medicines termed by Mialhe *coagulants,* or those agents capable of entering into chemical combinations with the albuminous elements of the blood, and forming with them an insoluble compound.—(*Traité*

de l'Art de Formuler, p. 25.) Alum, penetrating into the tissues, is first decomposed by the alkalies of the blood, so as to form an insoluble sub-salt, which is deposited in the tissues, filling their network, and, so to speak, tanning them. A new portion of alum, being no longer modified by the alkalies already saturated, then acts by fluidifying the albumen and stimulating exhalation. Lastly, the alum-albuminous fluid, taken into the circulation, again becomes solid when it meets the alkalies contained in the mass of the blood, and in this way is explained the agency of large doses in arresting hemorrhage. Thus, in a small quantity, alum is a local astringent, in a larger quantity, it becomes an energetic local fluidifier, and after absorption a general hæmastatic.—*Med. Chirurg. Rev.*, Oct. 1847, *from L'Union Médicale.*

182.—*Chloride of Gold in Granular Inflammation of the Conjunctiva.*—Dr W. Clay Wallace recommends a solution of six or eight grains to an ounce of water, as much superior to the nitrate of silver for the cure of chronic granular inflammation of the eyelids; in recent cases, he says, it is inferior to the first-mentioned application.—*American Journal*, Jan. 1848.

VII.—DIETETICS, HYGIENE, AND MEDICAL POLICE.

183.—*On the Diseases to which the Famine of last year gave Origin, and on the Morbid Effects of Deficiency of Food.* By Dr Donovan of Skibbereen. (*Continued from* p. 54.) On Fever.—The causes which produced the fever of 1846-47, seemed to be starvation, want of clothes and cleanliness, overcrowding, &c. Dr Donovan discusses these various causes *seriatim*.

Starvation.—Dr Donovan, notwithstanding the doubts entertained by many, has been convinced that famine is, *per se*, capable of creating a peculiar and highly contagious febrile disease, which, when communicated to the well fed, may induce in them fevers of different types, from the high inflammatory to the low typhoid, according to the constitutional peculiarities of the subjects attacked. The morbid condition here alluded to, and which resulted from insufficient or unwholesome food, exhibited many of the symptoms of fever. There were offensive effluvia from the body of the patient; the teeth were covered with sordes; the countenance was anxious and febrile; but there was not, as in ordinary fever, a disrelish for food; on the contrary, the appetite was in these cases generally craving, and in scarcely any instance was there any disturbance of the sensorial functions. That this disease was produced by want of food was proved by the fact, that it was most general wherever starvation prevailed most, and that food was found to be its best remedy. It did not appear until provisions became enormously dear, and starvation general, and it then spread throughout the country in so sudden and universal a manner, as to prove clearly that it must have diffused itself independently of its slow propagation by contagion. That it was contagious, however, seemed to be proved by particular instances which Dr Donovan relates, as well as by the general fact, that almost every person actively engaged in the administration of relief to the poor was attacked with fever.

Want of Clothing and Cleanliness.—In the autumn and early part of the winter of 1846 a fever prevailed, clearly traceable to want of cleanliness. The people were then in want, but not in starvation; but their clothes were all pawned to procure food; shirts were worn for months together; the straw used for bedding was seldom changed, and this state of filth led to obstruction of the cutaneous exhalents, and brought on high febrile action, which was not relieved until the functions of the skin were restored, which was generally by a critical profuse diaphoresis about the fourteenth or fifteenth day.

Overcrowding.—Dr Donovan considers this to be one of the most active causes in propagating fever, and rendering it malignant. He quotes examples of it in other cases, and mentions instances in which it had been very evidently observed by himself. The symptoms of the two fevers mentioned above were as distinct as the causes which produced them, and required very different plans of treatment. The fever from want of cleanliness in the autumn and winter of 1846, was characterised by high febrile excitement, very rapid pulse, quick breathing, intensely hot skin, headach, in many cases distressing vomiting, and in numerous instances jaundice, supervening suddenly, and disappearing generally on the third day without leaving any bad effects. The jaundice was not a formidable symptom, only one patient affected with it having died. Head symptoms very rare, and

petechial eruptions little observed in the poor, but more common in the better classes. Intense rheumatic pains were frequent.

The famine fever of the end of 1846, and beginning of 1847, was scarcely marked by any undue vascular excitement. The pulse was quickened, but very feeble; tongue slightly furred and dry—then dusky; teeth lightly covered with sordes. The appetite was not impaired; there was not much tendency to vomiting; but diarrhœa was frequent. Head symptoms were not observed, even petechiæ were rare; but sloughs on the parts of the body exposed to contagion were very common. There was such a strong disposition to relapse, that it seemed to constitute a necessary stage in the disease; few patients escaped, and some lingered on for months with excessive attacks of fever.

There were no peculiar *post-mortem* appearances in the active fever described above. In the cases with jaundice which proved fatal, the icterus arose from the congested state of the duodenum producing obstruction of the common choledic duct.

In the pure famine fever, the appearances were much the same as in those who died of starvation, except that there was in the fever cases more softening of the mucous membrane, in one instance with gastro-enteritic symptoms. There were several crimson-coloured blotches scattered over the inner surface of the stomach.

The treatment of these two kinds of fever was very different. In the first, bloodletting was used freely in persons of all ages, and it was generally followed by profuse diaphoresis, which relieved all the symptoms. It was not contra-indicated even where the patients had suffered from want, provided the reaction were of a sthenic character. In other respects the treatment was of the expectant kind. In the second species, the lingering asthenic famine fever, the treatment consisted in overcoming the irritability of the stomach by sinapisms, checking the diarrhœa by astringents and opiates, and administering food. That the supplying of food was the most effectual means of cure, is shown by a tabular statement, exhibiting the rapid decrease of mortality which took place on the introduction of a temporary relief act, which came into operation on the 10th of May 1847. During convalescence in these cases, the use of quinine was very beneficial in preventing relapse. —*Dublin Medical Press*, March 1, 1848.

184.—*New Article of Vegetable Food.* By M. LAMARE PICQUOT.—A commission of the French Académie des Sciences have reported regarding a memoir of M. Lamare Picquot, relative to a new alimentary plant which he has collected in North America, and which he has designated by the pronominal name of *Picquotiana*.

The plant belongs to one of the great sections of the Linnæan genus *Psoralea*, and resembles the P. esculenta of Parsh, but differs from that species in the appearance of its leaves and the form of its calix. The reporter, M. Gaudidiane, was inclined to have inferred it to a new genus, by the name of *Picquotia* or *Picquotiana*, but that similar botanical characters are found in another species of Psoralea, *P. cavescens*. The plant, like P. esculenta and allied species, is furnished with tuberous roots, which vary so much in their form, that M. Gaudidiane is inclined to believe that M. Lamare Picquot has probably found several distinct species or varieties of useful plants of this same genus, which are included under his name of Picquotiana; but the want of flowering specimens prevents this botanical question from being settled. But it is a matter of some interest in relation to the probability of its being successfully introduced into European culture.

The roots appear to be perennial, a circumstance which might interfere with their culture, from the length of time they would require to be brought to maturity, were it not that they appear to form in each annual layer, young as well as old, a large amount of well elaborated fecula, disseminated through an azotiferous parenchyma, which is quite free of all noxious qualities. These plants are found in North America between the 32d and 50th degree of latitude, more especially in the plains between the Upper Mississipi and Missouri, where they are in extensive use by the Indian natives as articles of food. The commission of the Académie are of opinion from analogy, that the plants may be successfully grown in Europe, especially if seeds or plants were brought as nearly as possible from the sources of the Mississippi and Missouri. And those which grow naturally between the 35th and 45th parallels of latitude, would probably thrive well in the south of France and Algiers.

M. Payen, who has analyzed the Picquotiana, found in 100 parts of the root nearly 28 of brown bark, 25 of woody fibre and cellulose, and 47 of sifted farina, and in some specimens as much as 60 or 70 per cent of this farina.

The composition of the farina is, azo-

tised matters, 4·09,—ashes 1·61,—starch, with traces of cellulose and fatty matter, 81·80—water, 12·50. The dried roots contain about 70 per cent of interior matter, consisting of two-thirds of farina and one-third of fibrous matters. The farina, mixed with an equal part of wheat flour, forms good bread, whilst the cortical portions are readily eaten by cattle.

The starch grains of these roots are characterised by a concave helum, situated at one end of the grain, and surrounded by several rounded mamellated projections.—*Comptes Rendus*, Mars 13, 1848.

[The report does not give us any idea of the size of these roots. Many North American species, such as *Apros tuberosa*, have amylaceous roots, but these have in general been found so small as not to be worth cultivating.]

185.—*Oil Cake as Human Food.* By Dr Pluskal.—The poor in Austria have been led, by the scarcity of food, to use rape oil-cake as a substitute for bread stuffs. It was used mixed with two-thirds of wheat flour, and made into dumplings. Three cases are given where this produced symptoms of gastric disturbance, with vertigo and fainting.—*Œsterreichische Wochenschrift*, No. 13.

186.—*Animal Jelly for Exhausted Cases.* By Dr Taussig.—Take of brown cinchona bark (cinchona fusca); of sarsaparilla bruised, each two drachms; ivory shavings; deers' horn shavings, of each two ounces; veal chopped, half a pound; put in three pounds of water to two pounds; then add an egg beaten up with its shell, boil for five minutes, and drain through cloth. It forms a firm jelly, of which the patient may take a table-spoonful three times daily in flesh broth.—*Œsterreichische Wochenschrift*, No. 32, 1847.

[There is no special advantage in the Huamalies bark recommended. Red or yellow bark would be better, and the bone shavings may be omitted without loss.]

187.—*Epidemics must be suppressed in the Places where they originate.*—Little is known of the immediate chemical or vital causes of epidemics; but in given circumstances, where many are immersed in an atmosphere of decaying organic matter, some zymotic disease is invariably produced; where there is starvation, it is most frequently typhus; cold, influenza; heat, it is cholera, yellow fever, plague. At the mouths of the Ganges, of the Nile, of the Niger; in London, particularly up to the 17th century; in camps, in barracks, in ships, in prisons formerly; in Ireland, in Liverpool, in all our towns now, the circumstances in which zymotic diseases become epidemic may be witnessed. A city breathing an atmosphere perfectly pure may not be exempt from every epidemic; but observation has shown that such irruptions are unfrequent, and fatal to few persons of strength or stamina. Internal sanitary arrangements, and not quarantine or sanitary lines, are the safeguards of nations. A salubrious city in an epidemic—like a city built of stone in a conflagration—is exposed to danger and injury, but not to the same extent as the present cities of Europe, which are left without any adequate regulations for the health and security of their inhabitants.

The great historical epidemics have diminished in intensity, and there appears to be no reason why they should not be ultimately suppressed, with the advances of the population among which they take their rise. Their origin is obscure; but influenza appears generally to become first epidemic in Russia,—cholera in India. It is in India that the source of the latter disease must be attacked. If the health of India become sound, Europe might be safe, and hear no more of the epidemic which is now traversing Russia. The attention of the Indian authorities has for some time been directed to the subject. The other nations of Europe are beginning to take an interest in public sanitary improvements; and any plans found to succeed in England, will no doubt be carried out as speedily as possible in all parts of her Majesty's dominions; for the vast population that owns her sway is intimately united. Asiatic cholera has taught us, that the lives of thousands in England may depend on the condition of the pariahs of Jessore.—*Registrar-General's Report, and London Medical Gazette*, November 5, 1847.

188.—*On the Alterations in the Proportions of Male and Female Legitimate Births in some Departments of France.* By M. Giron de Buzareingues.—The proportion of female legitimate births to male in the whole of France from 1802 to 1834, was 937 to 1000; from 1834 to 1843, it was as 941 to 1000. The examination of the numbers in the above series of years, however, shows in individual departments a much greater variation. Thus, in fourteen departments, viz., Allier, Charente, Dordogne, Gers, Indre et Loire, Maine et Loire, Sarthe, Vienne, Haute-Vienne, Ain, Charente-Inférieure, Eure, Haute-

Saône, the proportion of females has declined since 1834; in the three departments, Corrèze, Creuse, Lot et Garonne, it has increased; as also in the six departments, Bouches-du-Rhône, Côtes-du-Nord, Eure et Loire, Hérault, Rhône, Seine.

The author formerly (Révue Médicale, 1838) gave us the result of his observations, that where the occupations are chiefly laborious, the proportion of male births is above the average, but that the contrary is the case where the majority of the population had lives of less laborious exertion and more comfort. He finds the above results to corroborate this view. In the first series of departments, the population is chiefly agricultural. The second series has been emptied in part of its labouring population since 1834, by the great demand in Paris for its stone-masons; while the third contains in its towns a large population of manufacturers and seamen.

The conclusion from these facts is, that manufacturing industry, and every thing which is opposed to the full muscular development of the male part of the population, determines a relative increase of female and decrease of male births; while field-labour and every thing which in a high degree favours muscular exertion, has an opposite effect. The relative increase of female births for the whole of France is explained upon this theory by the extension of manufacturing industry, the diminution of laborious occupations, the increase of luxury, and the more numerous conveniences of life.—*Schmidt's Jahrbücher*, 1847, No. 10; *from Révue Médicale*, June 1846.

VIII.—FORENSIC MEDICINE AND TOXICOLOGY.

189.—*Charge of Murder of a Child by Drowning—Acquittal on the Plea of Insanity.*—Mary Sweetlove, a married woman, the wife of a baker at Sandwich, was charged before Mr Justice Coleridge at Maidstone, with throwing her infant into a rivulet, where it was drowned. The evidence showed unequivocally that she had drowned the child. It appeared that she had been reduced to great distress, and having received warning from the landlord of the house where she was residing that he could keep her no longer, she went out and threw the child into the water. Witnesses stated, that she appeared immediately after in a wild and excited state, and that for some time before the fatal occurrence her mind had been affected. Mr Emmerson, a surgeon, who saw the prisoner immediately after her child was found drowned, expressed an opinion that she was then in such a state of mind as to be unconscious of her actions. The jury acquitted her, and she was ordered to be detained during her Majesty's pleasure.—*London Medical Gazette*, March 24, 1848.

[There is no sufficient evidence here of insanity. The circumstances of distress in which the prisoner was, had no doubt unhinged her mind. But the number of cold-blooded murders is but few; so few as hardly to endanger materially the public safety. It is against murder, committed under the influence of some strong excitement, that the public requires to be protected. Is it possible that a woman, on the point of committing so great a crime as the murder of her child, should present a calm exterior to the bystanders, or that she should be upbraided with the commission of such a crime without considerable disturbance of her feelings? It seems manifest to us that this woman committed murder, and that the distressing condition to which she was previously reduced, was a proper ground for a recommendation to mercy by the jury, but not of acquittal.]

190.—*Acquittal from the charge of Murder on the ground of puerperal Insanity.* This was a charge against Martha Prior, a married woman, thirty-seven years of age, for the murder of her infant, thirteen days old, by nearly cutting off its head with a razor. From the evidence of a surgeon, Mr Bull, of Felstead, it appeared that, about a week after her delivery, the prisoner was found to be affected with illness, there being very great prostration, the eyes vacant and wild, the countenance haggard, and her whole state so suspicious that he gave directions that she should be kept perfectly quiet, that the child should not be given to her, and that she should not be permitted to be alone. It appeared in evidence, that in consequence of the surgeon's directions, the prisoner was watched by two women for two or three days; but that, on the thirteenth day after her delivery, being left in the house with no other person but a girl of thirteen, her daughter, and the infant, she succeeded by threats in forcing the girl to bring the infant to her in bed, and also a razor, with which she immediately

nearly severed its head from the body. The women who had watched her spoke to the incoherence of her thoughts, and the surgeon was of opinion that, at the time the prisoner destroyed the child, she was not aware what she was doing, or, if she was, that she was incapable of controlling her actions.

The jury found a verdict of not guilty, on the ground of insanity.—*London Medical Gazette*, March 24, 1848.

[We find Lord Denman in his charge to the jury in the above case, saying, "He must express his opinion that the judgment of the medical gentleman had been very rashly formed. How could one person dive into the mind of another, and express an opinion with regard to its being in an unsound state, when there was no evidence of any alteration of conduct, or any circumstances in the case to show alienation of mind? He said this on account of the great danger that would prevail to human life, if people were to be taught that a sudden impulse was to be an excuse for a crime, and that the atrocity of the offence itself was to be adduced as an argument in support of such a supposition. He could not help thinking, that such opinions were too often given by scientific men, upon too slight foundation for the safety of the public; but as he felt that, in this instance, there was no doubt that the jury would act upon the testimony of the medical gentleman who had been examined, it would be useless to proceed any further with the inquiry." We agree with Lord Denman, that the plea of insanity in excuse for crime is sometimes abused, and that the abuse of this plea endangers the safety of the public. But we cannot help thinking that his lordship has hurt the cause he advocates, by making his observations on a case that did not warrant them. It is unquestionably an evil, that the mere atrocity of a crime should be regarded as of itself sufficient to uphold the plea of insanity. But in the case before us, the state of things is in reality altogether different — though no act of violence is proved besides the act of killing the child, there is independently of that, what amounts to the strongest probability of insanity; namely, the period after delivery within which the child was destroyed, the circumstances which led the surgeon to direct the prisoner to be watched, and the infant kept from her; and lastly, the evidence of the women accordingly employed to be with her, that her thoughts were incoherent. When the unconcealed mode in which the act of killing was performed is taken into account, together with the above circumstances, we think there can be no doubt of the soundness of the surgeon's opinion, that the prisoner was under the influence of mental aberration at the time when she destroyed her child. Lord Denman dwelt on the circumstance, that a quarter of an hour elapsed between the time when she got the child beside her, and the asking for the razor, as incompatible with the idea of a sudden uncontrollable impulse to kill it; but the slightest acquaintance with the history of insanity as regards contrivance, is sufficient to remove all difficulty on this head].

191.—*Trial of Ann West at Nottingham on a charge of causing Abortion.*—The prisoner was a midwife, or pretended midwife, and the chief evidence against her was the mother of the child. Though she was acquitted, some points of the trial deserve attention. According to the testimony of the mother, the prisoner informed her that she was in the habit of procuring abortion, and that her charge was a sovereign. Thomson, the mother, afterwards went several times to the prisoner's house, on all of which occasions she was operated on by her, the operation consisting in forcing up some instrument, which was held by the prisoner. She was at last delivered of a male child some time in the sixth month of her pregnancy; the child was born alive, and lived for five hours. There was medical testimony to the effect that there were no marks of violence upon the child, and that death was caused by its premature delivery. The presiding judge (Mr Justice Maule) gave it as his opinion, that though the infant lived five hours, it was a case of murder if the prisoner had caused the premature delivery.—*London Medical Gazette*, March 17, 1848.

[It does not clearly appear, from the account of the trial, on what ground the prisoner was acquitted. The testimony of the mother, Thomson, was partly corroborated by another witness, and it was deposed in evidence that the prisoner had boasted of having done the same act for persons similarly circumstanced, a hundred times over. If the fact was distinctly established, that the prisoner had received 17s. 6d. for services in the sixth month of pregnancy, it was a most important corroborative circumstance against her. It was not shown in the defence, for what services the prisoner as a midwife received this reward. From the report of the trial before us, it is impossible to judge how far the preparation of the case on the part of the prosecution,

and that on the part of the defence, were well balanced, but we have seen complaints of late by the English judges, of insufficient preparation of criminal cases, owing to penuriousness in the authorities. If this be the case in trials of such a nice nature as this, with the ingenuity of counsel on the opposite side, it is offering a direct premium to crime.]

192.—*Method of Recognising the Presence of Blood on Clothes.*—Fibrin has the property of attaching itself to the texture of clothes. Sulphuric acid has the property of dissolving textures made of hemp or linen without altering the fibrine. If, then, a texture of this sort is suspected of being stained with blood, it is to be plunged in concentrated sulphuric acid, which dissolves the texture, and leaves the fibrinous part of the blood presenting a network, where may be distinguished the impressions made by the texture on which the blood was fixed.—*Journal de Chimie Médicale, and l'Union Médicale*, Mars 14, 1848.

193.—*Fatal Instance of Poisoning by Sulphuric Acid.*—By G. Corfe, Esq., Middlesex Hospital.—A man, forty years of age, was brought to the hospital three hours after having swallowed, intentionally, half a pint of vitriol, procured at an oil shop. He had vomited immediately, and soon after was in great agony. Before he was sent to the hospital, he had swallowed large draughts of magnesia and water. When brought to the hospital, his countenance was of a bluish tint, not unlike a man half-strangled; his extremities were cold and mottled; his pulse small and feeble; his mouth and clothes covered with some white fluid; the epithelium of the lips and tongue was only partially removed; its destruction over the fauces was more apparent. The warm-bath, numerous leeches, followed by a poultice to the throat; ice to be kept constantly in the mouth; six ounces of bi-carbonate of magnesia, in two pints of thick barley-water, to be sipped; a large oil enema; turpentine epithems to the feet, and two grains of calomel, a quarter of a grain of tartar emetic, and three grains of tragacanth every four hours, were the curative means prescribed. In five hours he was found tranquil and sleepy, but had vomited a large quantity of bloody mucus; his vital powers began to fail, and he died seventeen hours after he was brought to the hospital. The post-mortem examination was made the day after his death. The œsophagus, fauces, and alimentary canal were first laid open, when it was found that the epithelium was quite detached and corrugated from the base of the tongue to the cardiac opening of the stomach. The mucous membrane throughout was entire, but of a scarlet redness. The interior of this tube presented the exact similitude of a snake's back. The interior of the stomach was as though a thick coating of black pitch had been laid over it with a brush. This blackened surface was not charred blood, as it did not communicate any stain to the fingers, but really a destruction of the whole tissue of this viscus. Six inches below the pyloric end of the stomach, the same condition of the mucous surface was observable. Just at the middle of the duodenum, the peritoneal coat over the space of a shilling was white, and nearly destroyed by the action of the acid from within. That spot of this bowel where the bile duct enters was perfectly untouched by the acid; so that the shining mucous surface of health exhibited a striking contrast to the frightful ravages of this corrosive poison around it. A curious appearance was also observed along the valvulæ conniventes of the duodenum, and a portion of the jejunum; these surfaces were studded with numerous bells or bubbles of air, in size and appearance like carnelian beads. The destruction of the epithelium and the effervescing effects of the antidote, had, during the efforts of vomiting, driven the disengaged gas under the mucous membrane, and caused this singular appearance. The effects of the corrosion were visible as low down as the ileum. None of the fluids found in the several viscera affected litmus-paper. The blood was black and clotted in the left auricle, but the ventricle was empty and rigidly contracted.—*Medical Times*, Jan. 15, 1848.

194.—*Magnesia as an Antidote to Arsenic.*—On the 27th October last, at eleven o'clock forenoon, a lady in Paris took poison by eating a piece of bread and butter sprinkled with the powder of arsenious acid. Four hours after she took a cup of coffee, which produced vomiting. Between six and seven in the evening Dr Chammartin was called in, who found the patient suffering under all the symptoms of arsenical poisoning. He prescribed hydrated magnesia; 300 grammes (between nine and ten ounces) of gelatinized magnesia were administered in four doses in the course of two hours, giving rise to liquid alvine evacuations. The patient recovered. M. Bussy cites this case in answer to the objections made by M. Caventou against the use of magnesia.—*Union Médicale*, Fevrier 12, 1848.

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

VOL. I. JUNE, 1848. No. V.

I.—MEDICAL PHYSICS, CHEMISTRY, AND NATURAL HISTORY.

195.—*On the Effects of Nichol's Apparatus on Double Refracting Structures.* By SIR D. BREWSTER.—Having lately had occasion to examine some very minute crystals, and also some animal and vegetable fibres that possessed the doubly-refracting structure, Sir David Brewster was surprised to find that, by the use of the polarizing apparatus, he could eliminate two kinds of indistinctness which affect the vision of microscopic objects. The interposition of a Nichol's prism, or of an analysing rhomb of calcareous spar, however skilfully formed, between the eye and the object, has always been considered as deteriorating the microscope, and the observer is justified in removing it in ordinary cases, when he wishes to obtain the most perfect definition which his instrument can give. When the object, however, has a doubly-refracting structure of the slightest kind, so as to act upon polarized light, the polarizing apparatus is of vast service in developing its form and structure, not merely its doubly-refracting structure, but that form and structure which it exhibits in common light. The preceding observations are of course applicable only to those microscopic objects which depolarize light; but there is scarcely an animal or a vegetable fibre which does not possess this property. The minutest hair of the smallest animal which can be procured depolarizes light; and if a case should occur where the depolarizing structure exists, and could be rendered visible by doubling the thickness of the fibre, we might obtain this effect by making the polarized light pass twice through the fibre by reflection, and thus exhibit itself luminously on a dark ground.—*Phil. Magaz.* March 1848.

196.—*New Method of determining Phosphoric Acid.* By M. RAEWSKY.—The determination of the quantity of phosphoric acid is one of the most difficult processes in chemical analysis, and a simple and rapid method, to supplant the extremely tedious and troublesome processes now in use, is of great importance for facilitating the analysis of substances in which that acid occurs. M. Raewsky's process consists in precipitating the phosphoric acid in the state of phosphate of peroxide of iron. When this is done in an acid solution by means of acetate of peroxide of iron, the phosphate which falls is perfectly pure, and has the formula $Fe_2 O_3 PO_5$. All that is necessary then is to determine the quantity of iron present, and from it calculate the quantity of phosphoric acid. For this purpose, the author employs the following method:—The washed phosphate of peroxide of iron is dissolved in hydrochloric acid, the iron reduced to the state of protoxide by means of sulphite of soda, and its amount determined by the quantity of a normal solution of permanganate of potass, which it is capable of decolorising, according to Margueritte's method. This method is very rapid, and admits of a high degree of accuracy. MM. Pelouze and Dumas, who were commissioned to report upon the method to the Academy of Sciences, state that the error does not amount to more than $\frac{6}{1000}$, which is certainly as high, or even a higher degree of accuracy than can be obtained by the methods now in use.—*Comptes Rendus*, April 24, 1848.

[This method appears likely to be of great service in the analysis of many animal substances, and we have therefore thought it right to call the attention of our readers to it. For the full details we must refer to the paper itself, as well as to that of M. Margueritte on the determination of iron, in the *Annales de Chimie et de Physique*, 3d Series, Vol. xviii. p. 224.]

197.—*On the Preparation of Creatine.*

By Dr GREGORY.—Dr Gregory recommends the flesh of the cod and skate as the best source of creatine, which, though yielding two or three times less than that of fowls, is nevertheless five times as economical. The method of preparation is precisely that of Liebig, but Dr Gregory has obtained it from the flesh of several animals not experimented upon by Liebig, in quantities of which a table is given in the paper.—*Journal of the Chemical Society of London*, No. I. p. 25.

In another paper on the same subject, read to the Royal Society of Edinburgh, Dr Gregory states it as his opinion, that creatine is, in part at least, destined for excretion, in support of which he brings forward exactly the same arguments as those adduced in our review of Liebig's "Chemistry of Food," in our Number for September last, in favour of the same view.—*Proceedings of the Royal Society of Edinburgh*, vol. ii. p. 160.

198.—*On the Mode of Propagation of Various Entozoa.* By M. EMILE BLANCHARD.—The author has investigated with great care the entozoa inhabiting the bodies of domestic animals, particularly the "Douve du Foie," (*Fasciola hepatica*, Lin.), which is found in the liver of cows and sheep, particularly in some parts of Germany. He has assured himself, by the examination of a large number of cattle, that these parasites do not occur in the liver in any other than the adult condition, or at least very nearly full-grown. In the biliary ducts, on the other hand, the ova are to be found in great numbers, and in passing towards the inferior extremity of the intestinal tract these appear to undergo a process of incubation, being more advanced as they pass downwards. The intermediate stages between the ova and the adult animal are never to be found. It is, therefore, nearly certain that the ova pass out of the intestines with the excrements, and undergo development in some other situation, apart from the body of the infested animal; and that, after attaining nearly their full growth, they are received along with the food into the stomachs of other individuals, and thence pass again to the liver, where they propagate a new race.

M. Blanchard has also remarked, in regard to other entozoa, their occurrence only in the adult condition in the parts principally infested. This is the case with the *Amphistoma conicum*, which inhabits the first stomach of cows and oxen, with the *Brachylæmus variegatus*, which occurs in the lung of the *Rana esculenta*, and the *B. cylindraceus*, in that of the *Rana temporaria*. The *Tænia* and *Bothriocephalus* (tapeworms) of the human subject, are, on the contrary, to be found in every stage of growth, a whole family sometimes occurring in the intestines of one individual.

The intermediate stages of growth of the above-mentioned entozoa are still unknown; but from the extreme variety of forms known to be assumed by some of the *Trematoda* at different stages of their development, it may be supposed, without much improbability, that we are already familiar with the younger conditions of some of them, and have recognised them as different species. M. Blanchard directs particular attention to the enormous numbers of the ova of these animals, as showing that a vast majority of them must be abortive, probably in consequence of not meeting with the proper conditions for their development.

The author has examined a very large number of fœtal animals, the adults of which are apt to be infested with the above parasites; but has never, in any instance, found a fœtus so infested. He directs attention to this fact as strongly indicating the necessity of the introduction of the ova from without, probably along with the alimentary matters. — *Comptes Rendus*, March 1848.

199.—*On the Physiological Peculiarities of Albino Animals.* By M. SICHEL.—M. Sichel states, that about twenty years ago he made the singular physiological observation, which he has confirmed lately, that cats whose hair is entirely white, without mixture of any other tint, and without spots of any other colour, with the iris of a blue or grey-blue, are always deaf. All kinds of sounds which ordinarily frighten this animal, such as the cracking of a whip, the clapping of the hands, the barking of a dog, &c., may be made in their immediate neighbourhood without their hearing it, provided that it be not of a kind to transmit vibrations through the ground, such as stamping with the feet, or the blow of a hammer, &c. If the fur have the slightest spot of darkish, greyish, brownish, or reddish tint; and if the iris, instead of being blue or greyish-blue, be yellow, or mixed with a deep tint approaching the red or the brown, the auditive functions are normal. The blue tint of the iris is rare in the feline tribe, and is not found in general except in young individuals. This tint may become deeper as the animal grows older, and then, although the white colour of the fur is not changed at the same time, the sense

of hearing is restored. In the numerous cases of albinism in men and in animals which he has had occasion to examine, he has never observed any defect in the sense of hearing, and this imperfection is only observed in these white cats with blue or bluish irides. In an article "upon the different actions of certain exterior agents upon animals of different colours," in Casper's *Wochenschrift*, No. 18, 1846, Heusinger has collected a number of pathological anomalies, sufficiently curious, resulting from the total or partial white coloration of the hair. Thus certain plants produce poisonous effects upon individuals with white hair, or spotted white, among sheep, pigs, and horses, to the exclusion of individuals with black hair belonging to the same species. Upon cows spotted white, baldness, and other diseases of the skin, have attacked only the white spots. The above facts show that the absence or modification of the pigment in the mammalia, may exercise often a real and profound influence upon the functions, not only of the skin, but also of the other organs, as of that of audition. It has been for a long time known, that in man in the normal, as well as in the diseased state, other organs in the body, besides that of the skin and hair, present different manifestations of activity in the blonds and brunettes.—*Annales des Sciences Naturelles*, October, 1847.

II.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

200.—*Simple Follicular Glands in the Appendix Vermiformis.* By Dr Gerlach of Mayence.—The mucous membrane of the vermiform appendage is studded with small points, which give it a perforated appearance when held against the light. These are the openings of glands, which are easily visible in young subjects by the unaided eye. They consist of simple cœcal sacs, which are firmly imbedded in the submucous cellular tissue; and are very analogous to those discovered by Sprott Boyd in the stomach. These glands are also found in abundance on the surface of the cœcum, in the neighbourhood of the opening of the vermiform appendage, and become fewer in number according as they are removed from this point. Their secretion is highly acid, and is probably the cause of the acidity which, according to Tiedemann and Gmelin, characterises the alimentary matters in the cœcum. It is well known that these physiologists conceived that a second digestion takes place in the cœcum; and the analogy of the glands above described with those of the stomach, together with the acid nature of their secretion, appear to Dr Gerlach to support this view.—*Zeitschrift für Rationelle Medizin*, Heft 1, 1847.

201.—*On a Peculiar Alteration in the Shape of the Blood Corpuscles of Mammalia.* By J. Lindwurm.—When the blood of man or of the calf is treated with concentrated mucilage, the corpuscles become smaller and somewhat obscure, with finely granular (crenated?) edges. If, when thus altered, a saturated solution of common salt, or a little strong syrup, be added to them, their edges become distinct, and they assume the form of oval or considerably elongated flat plates, decidedly greater in size than the normal blood corpuscle. When seen edgeways, they appear as linear bodies pointed at the ends. The length of the corpuscles thus altered is 1-140th to 1-170th, their breadth 1-400th of a line.

This effect of reagents differs from all previously observed, in not being referrible to the laws of endosmosis and exosmosis. It is not presented, so far as hitherto observed, by the blood of birds and reptiles; nor do any other reagents, or any other mode of adding the above, effect similar changes in human blood. The altered corpuscles are dissolved by acetic acid, in the same way as the normal.—*Zeitschrift für Rationelle Medizin*, 1847, Heft. 2. [Henle has tested the correctness of the above observation.]

202.—*Movements of the Small Bones of the Ear.*—In an account of the movements undergone by the small bones of the ear, and their utility to the sense of hearing, Edward Weber offers an explanation of the rounded appearance presented by the external surface of the membrane of the fenestra rotunda when the membrana tympani is pushed inwards after death, and of its concave appearance when the membrana tympani is drawn outwards. He observes that the articulation between the head of the malleus and the body of the incus is such, that the former bone cannot be moved alone by the membrana tympani, but that both move together as one bone. He states that their axis of movement is the line drawn from the

slender process of the malleus to the short process of the incus; on these two processes adherent to the wall of the tympanum the bones turn, as on a pivot. Thus it happens that when the membrana tympani is pushed inwards, the stapes is pressed within the fenestra ovalis by the long process of the incus; when, on the contrary, the membrana tympani is drawn outwards, the stapes is carried out from the fenestra ovalis. The stapes could not exercise these movements completely if the cavity of the labyrinth was bounded entirely by firm and unyielding walls, for the fluid within it is almost incompressible. But by the pressure of the fenestra rotunda this difficulty is avoided. The fluid which fills the vestibule communicates with that in the cochlea, particularly with that of the scala vestibuli, which again freely communicates with that of the scala tympani; so that when the membrane of the fenestra ovalis is pushed inwards towards the vestibule, the consequent pressure on the contained fluid will be communicated to the membrane of the fenestra rotunda, which will be pushed outwards. In this way the movements of the membrana tympani produce indirectly the flux and reflux of the fluid of the labyrinth from the fenestra ovalis to the fenestra rotunda, by percussion, and by the yielding of the lamina spiralis of the cochlea.—*Baly and Kirkes' Supplement to Müller's Physiology, and Archives d'Anat. Physiol.* January 1846.

203:—*On the Irritability of the Muscles in Paralysed Limbs.* By Dr MARSHALL HALL.—(Proceedings of the Royal Medical and Chirurgical Society of London.) In the *Periscope* of our Number for January (p. 516), we analysed a paper of Dr Todd on this subject, and gave a summary of the views of Dr Marshall Hall. The opposition of Dr Todd to the views of Dr Hall, has induced the latter to present to the Society the present paper, in which he maintains, that the difference between Dr Todd's experimental results and his own, are owing to the employment by the latter of the strong and reiterated impressions of the electro-galvanic apparatus, instead of the simple current of the Cruickshank battery, which was always employed by him (Dr Hall). Cases are adduced showing the different, and sometimes opposite, effects of these two agents. Dr M. Hall contends, that it is only by applying a simple current of low intensity, and gradually increasing its force till the muscles become affected, that the muscular irritability can be truly tested. The strong and interrupted shock of the apparatus used by Dr Todd produces a complicated effect, in which the nervous centres play a prominent part, and which is therefore unsuited for testing muscular irritability. The effect of the weak current is quite different from reflex action, being confined to the muscles through which the current directly passes. Besides, if the brain of a frog be destroyed, and the nervous trunks of a limb be removed on one side, the limbs of the two sides are equally affected, although the one is subject to the conditions for reflex action, and the other not. Dr Hall recurs to the opinion formerly expressed, that the brain in its normal state is an exhauster of muscular irritability, which accumulates therefore to an abnormal extent in parts not subject to cerebral influence, when the other conditions are the same. He gives several additional cases, in some of which the diagnosis between cerebral and spinal paralysis was made by means of the galvanic test.

In the course of the discussion, Dr Todd stated, that he thought the peculiar effect of the weak current on the muscles of the paralysed limb was owing to the excitation of reflex actions, which, it is well known, are often more easily induced by slight stimuli, such as titillation of the skin, than by stronger ones. He thinks that the weak currents are probably insufficient to penetrate the limb, and produce impressions only on the cutaneous nerves. [This, however, is shown to be incorrect by Dr Golding Bird.] Dr Todd believes the galvanic current to act primarily upon the nerves, and only secondarily through them on the muscles.

Dr Baly enunciated Volkmann's law, showing the power of volition to modify and neutralize involuntary muscular action; and this without any apparent exertion of voluntary effort. Thus, in the tetanus produced by strychnia, he had on one occasion observed, that convulsive action was induced by an unexpected stimulus; while the same stimulus, when the individual was forewarned, produced no effect whatever. Many other conclusive instances were given of this remarkable fact. Dr Baly conceives, that, in the case of paralysed and sound limbs, the inferior irritability of the latter by galvanism, may in some cases be owing to the control of volition. He seems to view the actions excited by galvanism as being reflex.

Dr Golding Bird gave various illustrations of the mode of action of electric currents of small intensity, showing that their action on the molecules of matter (and therefore probably on the muscular

irritability) is often greater than more rapid and intense currents. Thus, gunpowder may be fired by a feeble current, while it is merely scattered by the direct passage of the charge of an electric jar.

The rest of the discussion has comparatively little scientific interest.—*Med. Gazette*, April 7, 1848.

[In reviewing the whole of this controversy, it appears to us that some important results have been established for science. The following points seem to be placed beyond doubt.

1*st*, That in some cases of hemiplegia, galvanic currents so weak as not to affect the sound side, produce muscular contractions in the paralysed.

2*d*, That in other instances the reverse of this is the case.

3*d*, That strong or rapidly interrupted and repeated currents produce results in some instances quite opposed to those of weak currents.

4*th*, That the control of the brain over the sound side may have the effect of neutralising involuntary, as well as of causing voluntary muscular action; and that this may occur without any marked external sign of volition, either in the expression of the features, or in the motions of the part affected.

The last of these points appears to be not wholly acquiesced in by Dr Marshall Hall, who supposes that the exercise of a voluntary control over involuntary action implies a counter-exertion of muscular power. This, however, is clearly proved by numerous facts not to be the case. On the other hand, Dr Marshall Hall has satisfactorily shown the movements produced by the weak current to be independent of reflex action; and his preference of the weak to the strong current, as a test of irritability, appears also to be well founded.

It is not by any means clear that the muscular irritability, as tested by galvanism, is independent of the condition as to excitability of the peripheral nerves of motion, which Dr Hall has left entirely out of the question. Neither has the influence of the brain upon the sound side been sufficiently understood in relation to this subject. We cannot therefore admit that Dr Marshall Hall has been successful in establishing his theory, until experiments have determined the amount to which the circumstances above mentioned interfere with the results.]

204.—*New Method for the Quantitative Determination of Urea.* By M. E. Millon.—For determining the quantity of urea, the author makes use of the nitrite of mercury. This salt dissolves in nitric acid without undergoing decomposition, and the nitrous acid, although it does not escape, continues to act upon urea, and converts it entirely into nitrogen and carbonic acid. In order to determine the quantity of urea in any urine, a definite quantity of it is mixed with the solution of nitrite of mercury, and the carbonic acid which escapes is absorbed by potass, and weighed. This weight, multiplied by 1·371, gives the quantity of urea present. This method is of great value, both from its accuracy and its rapidity, as each determination only requires about half an hour, and not more than a few minutes of actual attention.

In the course of his examination of the urine, the author has remarked a curious relation between the density of the urine and the proportion of urea, which may be thus stated: The figures which express the excess of density of the urine above that of water, express also the quantity of urea in 1000 parts. Thus, for instance, in a urine, the density of which was 1011·6, we found 11·39 of urea in 1000 parts. This is true, however, only of healthy human urine, and is not more than an approximation, and sometimes not a very close one.

The author has found in the urine of the rabbit from 3·01 to 6·14 parts of urea in the 1000, and in the stag from 92·08 to 111·09. He also gives the following determinations of urea in different diseases:—

	Density.	Urea in 1000 Parts.
Pneumonia (second stage),	1015	39·75
Do. . .	1025	45·94
Articular rheumatism,	1028	43·11
Double pneumonia, .	1017	42·90
Do. . .	1024	39·40
Phthisis (third period),	1043	24·25
Diabetes, . .	1037	8·25
Do. (accession of febrile symptoms),	1039	21·50
Diabetes, . . .	1035	5·57

—*Comptes Rendus*, vol. xxvi.

205.—*Urea in the Vitreous Humour of the Eye.* By M. E. Millon.—The vitreous humour of the eye of the ox contains 1·63 per cent. of solid substances. Among these, Berzelius has distinguished common salt, a little albumen, and a matter soluble in water; but the author has observed the presence of urea in the proportion of no less than from 20 to 35 per cent. of the dry residue. The vitreous humour in man and the dog has the same composition as that of the ox; and the

author considers it to contain nothing but common salt and urea. The aqueous humour also contains urea and common salt.—*Comptes Rendus*, vol. xxvi. p. 121.

206.—*Urea a Normal Constituent of the Blood.* By J. C. STRAHL.—The author took four ounces of the blood of a dog, mixed it with three times its volume of absolute alcohol, and filtered off the fluid from the coagulum. The alcoholic fluid was evaporated to 1-16th, and mixed with oxalic acid, and crystals of oxalate of urea were distinctly observed under the microscope, with a magnifying power of 80.—*Preussische Vereinzeitung*, Nov. 1847.

III.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

207.—*On Open Foramen Ovale, and its connexion with Cyanosis.* By Dr MAYNE of Dublin.—The author founds his observations on a very rare and remarkable case, of which he gives a detailed account. The foramen ovale in this case was so large as to allow a half-crown piece to pass with ease, and there was no Eustachian valve. The left auriculo-ventricular orifice was contracted so as barely to admit the points of two fingers, and the mitral valve was shortened so as to permit of regurgitation. These lesions were accompanied by immense hypertrophy of the right ventricle, with enlargement of the right orifices, and dilatation of the pulmonary artery and veins; while the left ventricle was very much diminished in thickness and size, and all the great vessels of the systemic circulation were diminished in calibre; the abdominal aorta admitting the little finger with difficulty, and its arch and the venæ cavæ being contracted in proportion. The valves of the aorta and pulmonary artery were healthy. The right auricle (which received the contracted venæ cavæ) was considerably dilated; the left auricle (into which the dilated pulmonary veins entered) was of natural size. There was apoplectic engorgement of the lungs.

The symptoms of these remarkable lesions were dyspnœa and palpitations on exertion, cough, and perpetual sweating. There was great indisposition to exertion, and the patient (a female) declared that death would be the consequence of any attempt at exercise. The quantity of food consumed by her was so small as to excite general surprise; she did not, however, become very emaciated even at the close of her life. The chest was examined frequently during two years, and always with the same results. There was extended dulness in the cardiac region, and a bruit heard over a limited space in the neighbourhood of the fourth costal cartilage on the left side; this bruit was inaudible both at the apex and in the line of the aorta. The rythm of the heart s natural. The respiratory sounds were every where excessively feeble, and this character was constant. At no time during the progress of the case, had the patient been affected either with dropsical symptoms or with cyanosis. She died suddenly at the age of twenty-nine, a few hours after a trifling exertion.

Dr Mayne remarks that, in this case, the obstruction at the left auriculo-ventricular orifice must have caused the current of blood to pass by the open foramen ovale from the left into the right auricle, instead of from the right to the left, as is usually the case. The absence of cyanosis is thus readily accounted for; instead of the pulmonary blood being partially circulated in the systemic vessels, the converse was the case, and the system was robbed of already aerated blood, a portion of which passed through the lungs a second time. The large size of the pulmonary vessels, and the diminished calibre of the systemic trunks, is evidently explained by this state of the circulation; and the feebleness of the respiratory murmur, may perhaps be owing to the circumstance, that a certain portion of the blood passing through the lungs had already undergone aeration, and, therefore, a smaller supply of air was requisite for the completion of the process.

The occurrence of contraction of the left orifice of the heart, in connexion with congenital patency of the foramen ovale, is rare in comparison with contraction on the right side. The latter condition is the most frequent cause of cyanosis.—*Dublin Quarterly Journal*, Feb. 1848.

208.—*Case of Rupture of the Chordæ Tendineæ of the Tricuspid Valve.* By Dr R. B. TODD.—This unusual lesion occurred in a man aged twenty-one, who died in King's College Hospital, London. Three years before admission he had been stabbed in the right side in a riot, and suffered great alarm; after this he had a pleuritic attack, for which he was largely bled. From this time till admission, he had frequently passed large quantities of blood by stool and by vomiting. General

anasarca had existed for a month before admission.

The liver and heart presented signs of enlargement on admission; there was crepitation, with feeble respiratory murmur in the back; the breathing was rapid; the pulse small and compressible. There was a loud systolic murmur at the apex of the heart, and over the sternum; also another less loud (probably anemic) at the base, which was prolonged into the aorta. The second sound was feeble. The patient died, five days after admission, of increased dropsy and dyspnœa.

The lesions in the heart were confined to the right side, which presented considerable hypertrophy, with dilatation. The anterior division of the tricuspid valve lay loose in the cavity of the ventricle; the chordæ tendineæ were torn across; and the musculi papillares, from which they sprang, were shrunk and atrophied. The ends of the ruptured tendons were swollen into little knobs, like the swollen ends of the nerves of stumps after amputation. There was no thickening of the lip of the valve. The aorta and its branches were small.

The state of the musculi papillares and tendinous cords shows the lesion to have been of considerable duration. It appears not impossible that it may have originated at the time of the riot. The united influences of fear and of a struggle might cause a temporary check to the respiration, sufficient to account for impeded circulation in the lungs; and hence the blood in the right side of the heart would be driven back upon the auriculo-ventricular orifice and its valve, causing a violent strain upon the latter. The hæmatemesis and the enlargement of the liver probably arose from the same condition; viz. engorgement of the systemic venous circulation consequent upon the regurgitation. The state of the veins of the neck could not be determined, owing to the anasarca. The stethoscopic examination was also necessarily very incomplete. — *Dublin Quarterly Journal*, February 1848.

209.—*On Cerebral Congestion in its relations with Hemorrhage and Softening of the Brain.* By M. Durand Fardel.—The following conclusions are arrived at by M. Durand Fardel, in a memoir upon this subject read to the Academy of Medicine in Paris. Cerebral congestion terminates almost always in one of three ways. It is dissipated spontaneously, or as the result of a proper treatment, or it leads to cerebral hemorrhage, or ramollissement. The state of the walls of the cerebral vessels, the existence of a partial alteration of the nervous pulp, consisting in a sort of rarefaction of tissue, the presence of anterior lesions of the cerebral substance, such as cysts, cicatrices, &c., can, without doubt, exercise some influence relative to such or such a result of cerebral congestion. It may be established in a general manner, that advanced age, in concentrating all the physiological activity of the economy towards the brain, or towards the chest, constitutes one of the most powerful predispositions to sanguineous fluxions, to hemorrhages, and to inflammations (ramollissement) of the brain, as it may be seen on the other hand equally to predispose to hyperemias and phlegmasias of the pulmonary organs. If it be true that cerebral congestion plays a principal part in the preparation and production of two of the most common and serious affections of the brain, it follows that the most positive indications exist with regard to the time at which art may interfere, and the hygienic and therapeutic means which ought to be employed in these dreaded affections.—*Gazette Médicale*, May 3, 1848.

210.—*Jaundice of New-born Infants.* By M. Hervieux.—M. Hervieux, in a recent thesis, has endeavoured to supply a more correct account of this disease than that hitherto given, derived from his observation of forty-five cases. He rejects the various divisions of the disease made by authors, as so many hypothetical suppositions, derived from observation of what occurs in the adult; and recognises but one form always appearing during the first month, and attended by the same symptoms and morbid changes. He combats the opinion of M. Leger, that the *induration of the cellular tissue* is always accompanied by jaundice; for in ninety cases of this disease, jaundice only manifested itself thirty-one times, and in forty-five cases of jaundice the induration has also been met with but thirty-one times, showing a coincidence, but not cause and effect. He also denies that *enteritis* is a cause, although a common complication of this as of other diseases of this age. Nor does he admit the engorged or inflamed state of the *liver* as any other than an epiphenomenon, nowise connected with the yellow colour of the skin. Still it is from the disorder in the functions of this organ, in its transition from an organ of hæmatosis to one of biliary secretion, that the icterus arises.

His anatomical observations on the

disease lead him to conclude—1. That all the organic tissues are in different degrees liable to the icteric effusion. 2. The intensity of colour which these tissues acquire is in direct proportion to the amount of their vascularity. He enumerates the various structures; but we will not follow him here, merely observing that the bones, ligaments, and cartilages were, in a certain number of cases, undoubtedly coloured, the sclerotica, however, being found so only once. Not only were the serous and mucous membranes coloured, but the fluids they secreted likewise. The biliary apparatus was found to have undergone just the same changes as it does in scleroma or enteritis—the so-frequent complications of icterus—but neither the biliary ducts nor umbilical veins presented the marks of inflammation described by some. The yellow patches in the parenchyma of the kidney, described by Billard, were of two sorts, the one arising from icteric effusions, the other of a far brighter colour, unconnected with it. The respiratory apparatus furnishes evident marks of colour; but the *nervous system*, and the *brain* in particular, were intensely coloured in thirty-one cases. The hue of the skin is often modified into a coppery or orange colour, by its coexisting vascularity. The conjunctiva, contrary to what has been stated, is *always* coloured, as is also the gingival mucous membrane, and that lining the lower surface of the tongue. The author has never detected the colouring matter in the *urine*, as seen in adults, or a decoloured state of the fæces. The disease commences with the conjunctiva the second or third day after birth, and goes through all its stages in six or seven, or at most fifteen days; exists very rarely beyong the twentieth, and never beyond the thirtieth day. Its complications (from which alone arise any danger in this affection) are purely accidental, being mere coincidences. In these forty-five cases such complications consisted of scleroma thirty-one times, enteritis fifteen times, muguet five times, pneumonia twice, purulent ophthalmia ten times. M. Hervieux, regarding simple icterus as rather the sign of a new function temporarily exceeding its physiological limits, than as a disease, recommends that the case should be left entirely to the resources of nature. —*L'Union Médicale*, 1847, No. 154, *and British and For. Med. Chir. Review*, April 1848.

211.—*On Certain Forms of Alkaline Urine.* By Dr G. OWEN REES.—In a case of extrophy of the urinary bladder, Dr Rees had an opportunity of observing the condition of the urinary secretion before and after contact with the mucous membrane of the bladder. He found that, when tested as it flowed from the extremities of the ureters, it had a normally acid reaction; but that as it trickled, drop by drop, over the mucous membrane of the bladder, it became rapidly alkaline, from the admixture of a copious alkaline mucus which was secreted from the exposed membrane. Dr Rees conceives the alkaline secretion to be thrown out for the protection of the irritable membrane of the bladder, and thinks that a certain number of cases of alkaline urine are due to the stimulating effect of an originally acid secretion upon the genito-urinary mucous membrane, which, from some cause, secretes an excessive quantity of alkaline fluid. He explains the effect of alkaline remedies, in some instances, in removing the alkalinity of the urine, on the supposition that the urine as secreted, being reduced nearly to the neutral condition, is thereby deprived of all irritating properties, and is enabled to pass over the genito-urinary mucous membrane without exciting any alkaline discharge to affect its properties secondarily. The distinction between such cases of alkaline urine and others, is only to be effected by attention to the history and symptoms, and by chemical and microscopical examination of the urine.—*Medical Gazette*, April 7, 1848.

212.—*Lectures on Pathological Chemistry—Chemical Constitution of Bone in Disease.* By Dr GARROD.—In rickets the amount of earthy matter in bones is much diminished. The phosphate of lime, which in health ranges from 45 to 60 per cent., is sometimes diminished to 30, 20, or even 15 per cent. It is not improbable that this disease may be dependent in some cases in a deficiency of earthy salts in the food. Dr Garrod proposes, in addition to the ordinary treatment, the administration of phosphate of lime, dissolved in solution of phosphate of soda. In exostosis and callus, the quantity of earthy matters generally is diminished, while the carbonate of lime appears to be in increased quantity. In caries it is stated that both the carbonate of lime and the earthy salts generally are diminished in amount. In mollities ossium there is also a diminished amount of earthy salts, and a large increase in the quantity of fatty matter, which appears to take the place, in some cases, of the gelatine and chondrin existing in healthy bone.—*Lancet*, May 20, 1848.

IV.—PRACTICE OF MEDICINE.

213.—Hebra *on Skin Diseases.*—(*Continued from* p. 87.)

The 12th Class, Neurosen.

In which no pathological alteration is visible.

A. *Hyperæsthesien.*

1. *Dermatalgia*—Pain in the skin, as if following a prick or blow.

2. *Prurigo latens*—Itching on the hands, feet, genitals, anus, &c., depends often on menstrual disturbances, and is frequent in the climacteric years. Most benefit has been derived from pencilling the part with *Acid. Hydrocyan.*, fomentations with *Aqua Laurocerasi*, and seat baths with *Cicuta*, *Hyoscyamus*, or *Belladonna.*

B. *Anæsthesien*—Are only present in cases of general anæsthesia.

C. *Dermatospasmus* — example *Cutis anserina.*

Syphilitic skin diseases—it is important to be able to recognise them, as a false feeling of shame frequently prevents the confession of previous infection. Hebra adduces three series of phenomena as fixed points for the diagnosis.

First, The symptoms common to all the syphiloids having only a conditional value.

Second, The special application of the former—the peculiar symptoms by which a syphilitic skin disease may be distinguished from its non-syphilitic fellows.

Third, The diseases of other organs simultaneously occurring with these syphiloids, and which cannot here be further entered on.

The signs of the first series are—

a The colour—only characteristic when the disease is of some standing. The original red colour becomes dark-brown red, from the non-absorption of pigment deposited from the blood along with the exudation. Hence, even in healing, syphiloids must pass through the various stages of dark-brown, to clear, pale yellow, yellowish-grey.

b The round form, in such diseases as do not otherwise assume this form—as *Lichen*, *Acne.*

c The peculiar seat. *Psoriasis syphilit.* affects the palms of the hands; others, chiefly those parts where the skin is close to the bones, as the forehead, scalp, &c., and generally they are extended over the whole body (except *Psoriasis, Lupus*).

d Itchiness is either awanting or trifling.

e Desquamation is very trifling, as in *Psor. syph.*

f The tendency to liquefaction and formation of crusts is, however, greater.

g The skin has a peculiar cachectic appearance (*Ricord's Syph. chlorosis*).

Hebra divides the peculiar symptoms according to the primary efflorescence.

The first form in secondary syphilis is the *macular syphiloid, Roseola syphilitica*, in bright red patches on the back, breast, brow, and face, which, distinct from one another, are either uniform with the skin (*Cutis variegata*), or project somewhat above it from congestion of a collection of sebaceous glands. In time the spots become brown, the healthy skin remaining white—*Ephilides venereæ.* The second form can also pass into the papular syphiloid; the congestion disappears, a considerable elevation of papulæ, the size of lentils or peas, of a pale red or normal coloration. According as these papulæ are larger or smaller, the disease is called *Lichen miliaris* or *lenticularis*; the peculiar colour, the round form, the absence of itchiness, and the trifling desquamation, characterise its syphilitic nature.

If these papulæ tend to suppuration, we have, thirdly, the *tubercular syphiloid*, which may be termed *Acne syphilitica*, and is the most frequent. The tubercles are either disseminated and quite round, or they are collected on one spot—*Lupus*; both kinds tend to ulceration *Syphilidelkosis.* If the papulæ are very large, they are called *Phymata syphilitica.*

The scaly syphiloid, principally appearing as *Psoriasis plantaris* and *palmaris*, has, instead of scales, but slight white elevations; a redder colour, however, than in other *Psoriasis.*

The *bullar* form, *Rupia syphilitica*, is more frequent; a red spot first appears on which a vesicle becomes formed, speedily reaching the size of a walnut or hen's egg; the contents become muddy, purulent, and decrustation begins from the centre, from which a chronic pointed crust arises; on removal of this crust, a deep syphilitic sore or vegetations remain.

The *pustular* syphiloid never forms *achores*, but only psydracious or phlyzacious pustules. *Impetigo* and *Ecthyma* also occur, and show a greater than usual tendency to formation of crusts.

Acne syphilitica is very liable to suppuration and the formation of crusts, and may be ranked among the pustular forms.

The various vesicular, pustular, and bullar eruptions pass so into one another, that they form generally the crust-building syphiloids. The spongy syphiloids—*Vegetationes syphiliticæ seu condylomata*—have either a broad base, or are pedunculu-

lated. They are variously named according to their forms.

A syphilitic disease of the nails appears as a horny degeneration, or as a sore under the nails of both the thumbs or great toes, of a semicircular form, enlarging both in width and depth. Hebra recommends as treatment a modified plan of inunction, except in *Rupia*, where, weakened by the excessive exudation, a tonic stimulant plan is best adapted.

In *Psoriasis palmaris* and *plantaris*, local inunction of mercurial ointment every evening, stockings or gloves being worn during the night, and a local bath in the morning, are what Hebra recommends. In the spongy syphiloids he employs either the *Deutioduret. hydrarg.* ʒj to ʒj *arung.*, or *Sublimat. corros.* ʒi to ʒij to ʒvj *alcohol*, or Plenck's paste, which always attacks only the diseased skin — *Casper's Wochenschrift*, 1847. Nos. 19-21.

214.—*On the Diagnostic Value of Tactile Vibrations (frémissement cataire) in Diseases of the Heart.* By PROFESSOR JAKSCH of Prague.—It is a common opinion, that a fremitus which is felt at the apex of the heart, and which accompanies the diastole, is a pathognomonic sign of an obstructed mitral orifice. Jaksch, while he admits the truth of this law in the generality of cases, believes it not to be universal in its application; and relates two cases where this sign in a marked form accompanied insufficiency of the aortic valves. In one of these cases an aperture of the size of a bean existed in one of the aortic valves; in the other a thickened semilunar valve was partially torn from its base, and played loosely in the aortic opening.

The means of diagnosis between these two conditions will often be found in the pulse, which, in aortic insufficiency, is generally large and sounding (tönend), while in mitral contraction it has not these characters. This, however, is not invariably the case; therefore Jaksch places more reliance on the presence or absence of a strengthened second sound in the pulmonary artery. In contraction of the mitral orifice this is generally present, and there is sometimes an appreciable shock to the finger placed over the third left costal cartilage. In aortic regurgitation, uncombined with mitral contraction, the second sound is absent in the aorta, and not abnormally increased in the pulmonary artery. An important aid in the diagnosis is also derived from percussion of the heart, which in aortic disease is increased chiefly in its longitudinal or vertical diameter; while in mitral contraction, which is attended by dilatation, the transverse diameter is most palpably affected. [Care should be taken, in making this estimate by percussion, to define, in the first instrance, the limits of the liver; which, especially in mitral disease, is often so much increased in size as to interfere with the vertical measurement of the heart.] The impulse of the heart is generally heaving in aortic regurgitation, and feeble in mitral contraction.

Vibrations and sounds frequently arise in the pericardium, which present some of the characters above described; but they are generally distinguishable by the previous and accompanying conditions, these being proof either of the presence of pericarditis, or of the absence of altered form in the heart itself. Further, the pericardial sounds are more evanescent, more irregular in duration and rythmic relation, and more easily altered by position and other circumstances, than those of the conditions above mentioned.

Systolic vibrations in the regions of the heart and great vessels have been observed by Jaksch in the following circumstances:—

1. In contraction of the aortic orifice. Distinguished by increase of the vertical dulness of the heart; propagation of the vibration and sounds along the arteries, and weak radial pulse, with unnaturally strong impulse. The second sound is not strengthened in the pulmonary artery.

2. In dilatation of the aorta immediately above the valves, without dulness on percussion of the upper sternal region.

3. In some cases of dilatation, and,

4. In some of true aneurism of the ascending aorta. In these the upper sternum is dull on percussion.

5. In cases where the aortic orifice is crossed by abnormal tendinous cords in the left ventricle.

6. In perforation of the inner leaf of the mitral valve.

7. In rupture of the tendinous cords, or excrescences on the mitral valve, so as to interfere with the passage of the blood from the ventricle into the aorta.

8. In narrowing of the descending thoracic aorta. Of this last he has observed one instance, in which the calibre was such as scarcely to admit the passage of a goose-quill, and in which a purring tremor, almost as strong as that of a spinning wheel, was communicated to every part of the thorax, and even to the loins and great wall of the abdomen.—*Vierteljahrschrift für die Praktische Heilkunde.* 1847. No. IV.

215.—*Treatment of Chronic Scrofulous Skin Diseases with Cod Liver Oil.* By Dr Hughes Bennett.—The oil has been found very useful in many of the chronic diseases which affect the scrofulous children of the indigent poor. The chronic eczema and eczema impetiginodes in such individuals is scarcely ever to be cured without paying attention to the general health; and here, as in similar cases, the most effective means of nourishment is the oil. The local treatment employed by Dr Bennett is an alkaline wash, composed of two drachms of the subcarbonate of soda, to a pint and a half of water. Where the eruption is in any way circumscribed, an essential condition of the treatment is to keep the surface moist with the alkaline lotion, by means of lint saturated in it, and carefully covered with oil silk.

Tinea favosa consists of parasitic vegetations growing in an albuminous or tubercular exudation on the surface. In the great majority of such cases, the disease will be found associated with a scrofulous constitution, and dependent on a bad diet, and the other depressing causes so common among the lower orders. Dr Bennett has found the following treatment very successful; internally, the cod liver oil in the usual doses; externally, poulticing the elevated crust on the surface for several days, until they soften and come off. Then carefully shaving the head, which usually presents a shining clear surface. Next applying, with a soft brush or dossil of lint, cod liver oil to the whole scalp, morning and night, and covering the head with an oil-skin cap, to prevent evaporation and the access of air. Every now and then, as the oil accumulates and becomes inspissated, it should be removed by gently washing it with soft soap and sponge. The average duration of this treatment is six weeks, which contrasts very favourably with the results of M. M. Mahon's treatment at the Hospital St Louis.—*Bennett on Cod Liver Oil*, Edinburgh 1848.

216.—*Diagnosis of Cerebral Diseases.*—The first step of the diagnosis consists in ascertaining whether the symptoms present a lingering and progressive, or an acute and sudden, character. In the former case the lesions to be expected are tubercles, chronic tumours, cystic and parasitic formations; the characters presented by which are very similar. Apoplexy, when not followed by paralysis or other symptoms, is merely congestive, and has left no permanent lesion behind; but when there occurs secondary paralysis, the formation of a clot may be affirmed. Convulsions or contractions with apoplexy denote, according to Oppolger, rupture of a vessel into the ventricles or superficial parts of the cerebral hemispheres. Convulsions or contractions with headach, and followed by paralysis, are symptoms characteristic of inflammation of the cerebral substance; intense headach with violent delirium, followed by paralysis or coma, are generally found to accompany inflammation of the membranes. It should be kept in mind, that many of the characters of these diseases are simulated by some cases of pneumonia. —*Clinical Notes from the Hospital of Prague. Hannoversche Annalen*, 1847.

217.—*Condition of the Gums in Phthisis.* By Dr Frédericq.—The author's attention was first called to this subject in 1844, when he observed a line of a brick-red colour near the free edge of the otherwise normal gums of a phthisical patient. The line was very narrow, and ran parallel with the edge of the gums, but only opposite the incisors and canine teeth. Since that period, he has examined the gums in numerous subjects of phthisis, and has always found this red line more or less distinctly visible, although sometimes only opposite the inferior median incisors. The researches of the author do not enable him to say whether this sign manifests itself as one of the earliest symptoms of phthisis, nor to declare absolutely that it is seen in no other disease, although he has never yet met with it in such.—*Brit. and For. Med. Review, from L'Union Médicale*, 1848, No. 5.

V.—PRACTICE OF SURGERY.

218.—*On Catheterism of the Œsophagus in Cases of Stricture.* By M. Trousseau. —This mode of treatment, which was revived by M. Gendron (*Retrospect*, p. 69), is highly recommended also by M. Trousseau, who has seen several cases successfully treated by M. Bretonneau, and publishes two cases from his own practice. He uses a delicate whalebone rod not more than a line in diameter, and from twelve to sixteen inches in length; at either end of this is fixed an olive-shaped dilator, somewhat straitened in the middle, so as to permit of being surrounded by a piece

of dry sponge, which is fixed on with sealing-wax, and is made very slightly greater in diameter than the stricture. The sponge is further secured by a thread, the ends of which are left eight inches in length, for a purpose to be presently mentioned. After moistening the sponge with yolk of egg, it is passed beyond the isthmus of the fauces. Traction is then made on the threads, by which means the end of the instrument is made to take the direction of the œsophagus instead of striking the back of the pharynx. So soon as the stricture (which is generally at the level of the larynx) is felt, the instrument is pushed onward, with some force and a rotatory motion, the left hand being used to support the larynx, which would otherwise be pushed down, and would carry the œsophagus with it. It is of importance to pass the obstacle as quickly as possible, otherwise the presence of the foreign body is apt to induce suffocation. When once the passage has been effected, the sponge is again retracted; and this is repeated a second, and perhaps a third time, before finishing the operation. The operations may be repeated twice a-day, gradually increasing the size of the sponge; and, when the passage is so large as readily to admit a sponge of the size of an ordinary bolus of food, the intervals may be much longer. The treatment should be kept up in cases of long standing for several months, or a year; in more recent cases a few weeks are sufficient. M. Trousseau has tried in one case the cauterization by nitrate of silver, as recommended by M. Gendron; but he does not recommend this measure, believing it to be in the œsophagus, as in the case of the urethra, seldom required. —*Révue Médico-Chir.*, March 1848.

[It is worthy of remark, that almost all the cases of strictured œsophagus in which this mode of treatment has been of service, have been traceable to diphtherite. This may explain the invariably high seat of the stricture. In strictures with loss of substance, as also in many other cases mentioned by Sédillot (*Retrospect*, p. 69), catheterism would be unavailing; and cauterization in such cases would be a very unsafe proceeding.]

219.—*Treatment of Scrofulous Caries of the Bones with Cod Liver Oil.* By Dr Hughes Bennett.—A general opinion prevails among surgeons, that caries of a spongy bone never heals spontaneously. Ths result of this view is, that whenever caries is ascertained to exist in a bone, it is cut off or cut out if possible, and if not possible the patient is left to the operation of nature. It has frequently happened in this latter case, that change of air and an improved diet have led to the most happy results, and that, in spite of theory, the patient has got well. Every surgical practitioner of any experience, for instance, must have met with cases where caries and distortion of the vertebræ have terminated in anchylosis, and the patient regained his health. Many dwarfs are living examples of scrofulous caries having occurred in the spongy portion of bones when young, which has disappeared, leaving them, although deformed, in perfect health. The theory, therefore, to which allusion has been made, is incorrect, and there is little doubt that many cases which have been made the subject of surgical operation, might have recovered without it, by adopting a system of treatment directed against the constitutional affection.

Dr Bennett has seen some remarkable instances of caries and distortion of the vertebræ, which have produced perfect paralysis, and reduced the patient to the last stage of weakness. Under such circumstances the oil has frequently kept up the strength, and the patient has ultimately recovered, as in several instances he has recorded. He saw three cases in the wards of Professor Heusinger of Marburg at once, all of which had paraplegia. The one most recently treated still had paralysis; the other two, who had been under treatment some months, had recovered from the paralysis, could walk without difficulty, and were in every respect nearly well. Two other cases of a similar kind were in the wards of Professor Jaksch of Prague, which he visited shortly afterwards.

The cases recorded are sufficient to prove the powers of the oil, in a class of diseases too frequently considered as hopeless. In none are more beneficial effects produced by it.—*Bennett on Cod Liver Oil*, Edinburgh 1848.

220.—*The Application of Ice in Traumatic Lesions.* By M. Baudens.—M. Baudens, senior surgeon of the Military Hospital, Val-de-Grace, has long been in the habit of applying ice, either with or without salt, in the treatment of every description of traumatic lesion, for the purpose of keeping down the abnormal temperature which, in these, is so much higher and so much more persistent than would be supposed by those who had not examined into the subject. Not only is the cure expedited, but the patient's sufferings are much alleviated, while no ill consequence has resulted.

The patient's feelings are taken as the guide, indicating when the pathological caloric has become exhausted; and wet compresses are then gradually substituted. Not only is the ice employed at the commencement of the affection, but throughout its course, even while the wound is in a state of free suppuration.—*Gazette des Hôp.*, 1848, No. 15.

221.—*Guides for performing Partial Amputations of the Foot.* By M. Heurotat.—The author does not consider sufficiently explicit the directions given to find the articulations in the partial amputations of the foot, which were suggested and practised by Chopart and Lisfranc, and he gives the following measurements to guide the operator in these disarticulations:—If the inner border of the foot is measured from the heel to the extremity of the great toe, at a point exactly half-way between the extremities of this line, lies the articulation of the first metatarsal bone with the internal cuneiform. Half-way between this point and the extremity of the great toe, lies the articulation between the first metatarsal bone and the first phalanx of the great toe.

Again, to find Chopart's articulation, a line drawn from the articulation of the internal cuneiform with the first metatarsal bone to the extremity of the heel, is to be divided into three equal parts, and at the junction of the anterior with the middle third, is the point where will be found the articulation of the navicular bone with the astragalus.—*Révue Médico-Chirurgicale.*

[These directions, if correct, will be found useful in performing the partial amputation of the *left* foot, as the operator, standing on the left side of the patient, enters the knife on the inner border of the foot. The guides usually given will, however, be found of more importance in operating on the right foot, in which the incisions are commenced on the outer side. The projection of the head of the fifth metatarsal is here easily felt, and is the guide to the tarso-metatarsal articulation. The articulation through which Chopart's operation is performed, lies half-way between this point and the extremity of the external malleolus.]

222.—*Death from the Admission of Air into a Vein in passing a Seton in Front of the Neck.*—On Wednesday, March 29th, an inquest was held before the coroner for East Surrey, to investigate the circumstances attending the death of William Richards, aged thirty-nine, a coal porter.

The deceased had applied to Dr Willis for advice, a fortnight before the day of his death, on account of laryngitis. Leeches were applied and blisters, and on the morning of his death, the patient came to the house of Dr Willis for the purpose of having a seton introduced. He was set in a chair, and the skin being pinched up with the finger and thumb, a seton needle, armed with a strip of lint, was thrust in two inches and a half above the sternum. At the moment of its entrance, Dr Willis thought he had opened a subcutaneous abscess communicating with the windpipe, as a slight hissing noise was heard. The man instantly became pale and fainted, and then became rigid and convulsed, and it was evident that the hissing noise had proceeded from air having entered a vein. Dr Cormack from Putney was consulted, and the patient was bled from the arm, which produced temporary amendment; but he died between six and seven hours after the accident.

Mr Syme, examined at the inquest, concurred in the above opinion as to the nature of the case, and approved of what had been done in the way of treatment. He had examined externally the wound of the seton with reference to the situation of the large vessels, and was satisfied that it was so remote from them, that they could not by possibility be implicated. Dr Cormack corroborated Dr Willis' testimony.

The jury returned the following verdict:—"Accidental death from the entrance of air into a vein in the neck during an operation performed by Dr Willis; but the jury cannot separate without expressing their opinion, that such operation was cautiously and skilfully performed; and, as it appears by the evidence adduced, the said operation was fully warranted by present practice."—*Provincial Med. and Surg. Journal*, April 19.

223.—*Fracture of the Orbit from a Lead Pencil.* By Mr Hughes Hewett.—A child, two years old, fell on crossing the room with a lead pencil in her hand.

The pencil penetrated the right orbit, having pierced the eyelid just below the supra-orbital ridge. The eye did not appear injured in any way, and there were no symptoms of concussion. Considerable force was required to extract the pencil, which had penetrated to the depth of about two inches. Fomentations were applied to the wound, which closed in twenty-four hours. The child ate its dinner much as usual soon after the acci-

dent, and slept well during the night. Next morning it was drowsy. On the following day she had a convulsion, twitching of the muscles of the face, legs, arms, &c., after which she rapidly lost consciousness, sight, and hearing. On the fourth day she had constant *subsultus tendinum*, and could not be roused at all. On the sixth day *trismus* came on, and she died early on the morning of the seventh day.

On examination of the body, there was a fracture of the roof of the orbit, the point of the pencil having entered the brain. There was complete softening of the anterior lobe (the part of the brain in the neighbourhood of the injury), and extensive subarachnoid effusion of greenish yellow lymph, mixed with serum.—*Dublin Med. Press*, April 12.

224.—*On the employment of Flour in Erysipelas.* By Dr FAVROT.—Dr Favrot, after testifying to the unsatisfactory results obtained from the nitrate of silver, sulphate of copper, &c., in erysipelas, details some cases in which he has found the application of *flour* of the greatest advantage. Resorting to it in his first cases, after the various other means had been tried in vain, his success was so great as to induce him to employ it in future at an earlier period, which he did with equal benefit. With this means, indeed, English surgeons are familiar, and the late Mr Earle was especially in the habit of attaching considerable importance to its use, but only in superficial erysipelas, and then rather as affording great relief to the irritated skin than as possessing any marked curative power. The cases related by Dr Favrot are, however, of a far more serious character than this, being examples of deep-seated erysipelas, and attended sometimes with great and alarming constitutional symptoms. The parts being completely smothered in flour, and this repeated every quarter of an hour, a remarkable amendment in these symptoms speedily took place, the patients also expressing their sense of comfort.

M. Huguier, at the author's request, employed the remedy at the Beaujon, and with the same results. M. Favrot, though unwilling to speculate upon the subject, is disposed to refer the benefit to the fact of the exclusion of the air from the inflamed surface.

Another number of the journal from which we are quoting, contains a note from a Dr Wolf, confirmatory of Dr Favrot's statements, in which he also states that Vogt, Schwartze, and other German writers, some time since, expressed highly favourable opinions of the same means.

M. Malgaigne, too, adds his testimony, stating that he has employed flour not only in erysipelas, but also in various deep-seated inflammations and extensive burns; and in most of these cases with undoubted advantage.—*Brit. and For. Medico-Chirurg. Review, extracted from Révue Médico-Chirurgicale*, Vol. ii.

225.—*Stony Cataract.* By Dr AL. MAGNE.—M. Magne extracted from a man's eye, æt. forty-seven, and who had been cataractous for twenty-five years, after an injury, a stony cataract. The operation was performed at two different periods (September and October 1847), and the following is his description of it:—

"The posterior capsule was entirely stony, with the exception of a very small central point; the anterior capsule presented the same alteration, except that the central point was larger; it presented four very distinct stony plates, the thickness of which was at least equal to that of a hen's egg. The colour was of a chalky white, passing into yellow. When the fragment was placed in water, the appearance exactly resembled that of a pilgrim's shell. As for the lens, it no longer existed, having been already absorbed, as was shown by the irregular puckered and wrinkled form of the centre of the anterior capsule." M. Orfila found the cataract to be entirely composed of phosphate of lime, and a very small quantity of animal matter.—*Gazette Médicale*, 5 Avril 1848.

VI.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

226.—*Unavoidable Hemorrhage—Cases in which the Placenta was naturally Expelled, or spontaneously Extracted before the Fœtus.* Drs WALLER, RAY, PAVESI, STOKES, and MEADOWS.—Dr Waller, in some clinical observations upon placenta prævia, details the particulars of six cases in which that organ was either expelled before the child by the unaided efforts of nature, or extracted artificially in order to save the life of the mother.

1. In the first case the woman had arrived between the sixth and seventh months of pregnancy. The placenta was attached nearly to the whole circumference of the os uteri. The hemorrhage

was very trifling. When strong pains supervened the placenta was spontaneously expelled, and soon followed by the fœtus, which presented by the back.

2. In this case the placenta was expelled nearly an hour and a half before the child. The fœtus had been long dead; there was, therefore, no circulation through the placenta, and consequently no hemorrhage. Mother recovered.

3. Dr Waller was sent for in this case by Messrs Powell and Goddard. The placenta had been entirely removed. No hemorrhage followed its extraction. The child presented by the arm, and embryotomy was required to effect its delivery, which was accomplished with difficulty. The mother died at the end of a week.

4. Mr Doughty requested the assistance of Dr Waller in this case. The patient had been bleeding for some hours, but no serious symptoms of exhaustion had come on. The placenta had been attached all around the os uteri, but a small portion was detached anteriorly, and thus formed an aperture through which the funis descended. Before turning, Dr Waller detached the placenta entirely from its connexion with the uterus. No hemorrhage followed the separation, and shortly, the child was delivered. It lived. The mother made a good recovery.

5. A case of partial placenta prævia.—The arm of the child presented. The os uteri was rigid, and only partially open. As there was no possibility of turning, the placenta was detached and dilatation waited for. No hemorrhage occurred, and, in less than twelve hours afterwards, turning was had recourse to, and the child extracted. The woman died of muco-enteritis in the course of the week.

6. Dr Waller saw this case with Mr Hall. She was just entering the ninth month of gestation, and had previously borne children. The placenta was attached over the entire circumference of the os uteri, which was rigid and just beginning to dilate. Turning was impracticable. The hemorrhage was severe. The placenta was therefore entirely detached without rupturing the membranes. The hemorrhage entirely ceased. More than twelve hours after, the child, presenting by the feet, was delivered with a little assistance. The mother recovered. —*Medical Times*, Vol. 1847-48.

7. A case is related by Dr Ray of a woman, aged twenty-eight, in labour with her third child. She had previously miscarried twice. He found her in a state of the deepest prostration from loss of blood. Having witnessed in a previous case the immediate cessation of the hemorrhage on the expulsion of the placenta, and believing that increase of exhaustion from further loss of blood, or from emptying the uterus, might probably be fatal, he resolved to extract the placenta. Hemorrhage continued during its separation, but ceased with its removal, and no coagula formed afterwards in the vagina, although the labour continued five hours after the operation, when the child was delivered after having had the head broken up.—*Medical Gazette*, January 21, 1848.

8. Mr Stokes of Nailsworth, relates the case of a young woman in labour with her first child, to whom he was called. She had been flooding for a considerable time, and, on arriving beside her, he found her in deep prostration from loss of blood. He separated the placenta, and administered stimulants internally, which had the effect of arresting the bleeding, and of restoring uterine pains. Delivery by turning was at last found necessary. She recovered. — *Lancet*, April 1, 1848.

9. Dr Meadows of Ottley was called to a woman, æt. thirty-eight, in labour with her third child. She was in a complete state of exhaustion, and almost insensible, slight labour pains having come on about two hours previous to his arrival, with excessive hemorrhage. The os uteri was well dilated, and the placenta attached all round. The hand was introduced, and the placenta withdrawn. The hemorrhage immediately ceased. After a dose of ergot, pains returned, and expelled the child under a head presentation. She recovered.—*Lancet*, Jan. 1, 1848.

Removal of Double Placenta before the Delivery of the Second Child in Cases of Twins.

10. Dr Pavesi relates a case of hemorrhage produced by the insertion of the common placenta of twins upon the neck of the uterus. After the birth of the first child, the author extracted the placenta common to both. Both children lived.—*Annali Universali di Medicina*, Feb. 1848.

11. Dr Ray relates a case very similar to the preceding. The woman was seized with violent flooding at the seventh month of pregnancy while walking in the fields, and was scarcely able to reach her home, which lay at a short distance. The membranes were ruptured at the side of the presenting placenta, and the first child delivered by a foot, which presented. On discovering the presence of a second infant, Dr Ray ruptured its bag of mem-

branes, and the gush of waters washed out the placenta which was common to both children. The second child presented by the head, and was born by the natural efforts. After the expulsion of the common placenta, pains did not return for two hours, and it was three hours after its expulsion before the child (which was still) was born. The mother recovered.—*Medical Gazette*, January 21, 1848.

[These cases are additional illustrations of the important practical fact, pointed out by Dr Simpson (See our *Journal* for March 1848), that the hemorrhage in placental presentations stops when the placenta is *completely* detached. Within the last few days we have seen a case of severe unavoidable hemorrhage in a woman seven months gone with child, in which Dr Simpson successfully separated and removed the placenta; the hemorrhage ceasing.]

227.—*Internal Uterine Hemorrhage before and after Delivery.* M. Van Hœsendonck, Dr Johnson, Dr Davies, Dr Tyler.—*Before Delivery.*—In M. Hœsendonck's case the female had not yet reached the full term of her second pregnancy. She was very plethoric, and while engaged in severe work before a large fire, suddenly felt ill and fell down, crying out that she was dying. Her pulse was small, and she was covered with a cold sweat; and, although stimulants were freely used, she continued in a fainting state. On applying the hand to the right side, there was felt a large soft tumour newly formed.

Labour was immediately induced by rupturing the membranes, and a dead child was delivered by the forceps. A firm clot of blood weighing a pound was evacuated; and when the hand was introduced to take away the placenta, it was found partly detached.—*Révue Medico-Chir.* January 1848.

In M'Clintock and Hardy's excellent practical work, we find, as related by Dr Johnson, two rare cases of hemorrhage between the placenta and uterus, which proved fatal to both of the mothers. In neither of them was there any external hemorrhage, and the separation of the placenta seemed to have been produced in one of them by external violence, whilst in the other it was apparently of spontaneous origin. On the *post-mortem* examination, nearly the same appearances were found in each. The placenta, except at its extreme margin, was entirely detached from the uterus, and the cavity or interspace between the two contained an enormous quantity of partially coagulated blood.

After Delivery.—Dr Tyler relates two cases of internal hemorrhage occurring after delivery. They present no points of great interest. The first was opportunely treated with cold applications and internal irritation, and the woman recovered. The other case proved fatal.—*British Record of Obstetric Medicine*, Feb. 1, 1848.

In Mr Davies' case the patient had been for two and a half hours delivered of her first child when he discovered that she was in a state of syncope, evidently arising from loss of blood, and yet the linen about her person was perfectly dry. By timely attention, the uterus, which was considerably enlarged, was made to contract, and expel a clot of immense size. This woman made a slow and bad recovery.—*Brit. Record of Obst. Med.* No 7.

[Internal uterine hemorrhage after delivery, is an occurrence by no means so rare as the particular notice of the above cases would seem to indicate. But it is of so much importance pathologically and practically, and at the same time so much forgotten and neglected, as to justify us in detailing them. They warn us, in plain terms, against placing any reliance in the vaginal plug as a means of arresting hemorrhage connected with delivery. The plug cannot hinder, in any degree, the occurrence of hemorrhage internally, but rather tends to produce it. It has no influence in stopping the flow of blood, but merely prevents its appearance externally. And its discharge or retention is not a matter of indifference, inasmuch as its accumulation in the uterine cavity, as may happen after plugging, necessarily involves an enlargement of that organ,—a circumstance which all accoucheurs agree in considering as a strong predisponent to hemorrhage, the very accident which some imagine the plug to have a power to arrest.]

228.—*Difficult Labour from Cicatrices of the Vagina.* Dr Purefoy.—The first case is that of a woman, æt. forty, who had previously been delivered by craniotomy in a protracted and severe labour, and after which the vagina sloughed, giving rise to a vesico-vaginal fistula. In this, her second confinement, there was found, on examination, a thin, sharp, rigid and nearly circular cicatrix at the upper part of the vagina, forming a stricture of this part, and completely preventing any deeper examination. The cord, however, was felt to be prolapsed, and the arm presenting.

Subsequently, this stricture was found to be connected with the os uteri by intimate adhesion. Repeated attempts with the finger succeeded in dilating it, and at last the hand was passed into the uterus, the child turned and delivered, after a labour of about two days' duration. It was only seven and a half months old. Violent inflammation of the uterus with fever set in, and the patient sank at the expiration of a month, worn out by repeated rigors, hectic fever, sloughing and suppuration of the vagina, with obstinate diarrhœa, and attacks of bilious vomiting.

In the other case, the woman was in labour with her third child. Of her second child she was delivered with great difficulty, by the aid of instruments. In the seventh month of this her third pregnancy, she underwent much fatigue, and labour pains supervened. On being examined, the fœtal heart was found pulsating, and the breech presenting at the os uteri. The pains caused her excessive suffering. After labour had continued nearly two days, a dead child was born. She made a good recovery.—*Dublin Journal of Medical Science*, May 1848, p. 560.

229.—*New Method of inducing Premature Labour.* Dr Kiwisch.—This new plan is said to have been discovered by Dr Kiwisch, and tried with success by M. Bartsch and M. Klein. Some time ago it was proposed to induce premature labour by injecting fluids of various kinds between the membranes and the uterus; but the present plan consists in the injection of a stream of warm water into the vagina, making it impinge upon the os uteri. This form of local douche is continued from six to twelve minutes, and repeated every six or eight hours till labour comes on.

We give no further details of a process which, we doubt not, will never come to be resorted to in practice, on account of its inefficacy.—*Memoriale della Medicina Contemporanea — Annales de Thérap.* March 1848, p. 477.

230.—*Removal of Uterine Polypi.* Dr Hamel, Dr Mitchell, and Dr Flumiani.—A woman, aged fifty, still menstruating, was the subject of repeated and severe hemorrhage, which she attributed to the period of life she had reached, and which was making serious inroads upon her general health. On submitting to a vaginal examination, there was found a very large pediculated fibrous polypus; but it was impossible to determine where the pedicle was attached, on account of the narrowness of the vulva, although M. Hamel had incised the hymen to assist him in his exploration. The size of the tumour was such as to render it impossible to bring it out externally without lacerating the vulva. The pedicle was ligatured by the ordinary serrenœud, and divided in the course of two days, when the softened polypous mass was removed by aid of tenaculum forceps.—*Gazette Médicale de Paris*, April 1848, p. 269.

Dr Mitchell's patient was a lady of delicate constitution, who had borne five children, and who was believed to labour under prolapsus of the uterus. On examination, he found lying in the vagina a globular tumour of the size of an orange, with a pedicle of about one-third the thickness of the polypus, and which was encircled by the mouth of the uterus. By the aid of the speculum the pedicle was ligatured by the double canula of Gooch. It was nine days before the pedicle was cut through, and during that time the woman suffered severely from hemorrhage, and other distressing symptoms.—*British Record of Obstetric Medicine*, No. I. Jan. 1848.

Dr Flumiani's patient was forty-two years of age, had been several years married, but had had no children. Till she was forty years of age her health was always good; but then it began to fail, and she was troubled with repeated uterine hemorrhages. At the same time she felt a tumour rising above the pubes, but did not pay much heed to it. At last, she called in the aid of Dr Flumiani, who found her complaining of obstinacy of the bowels, frequent hemorrhages, incontinence of urine, and various symptoms of general ill health.

On examination, he discovered within the uterus a tumour, smooth on the surface, of an egg-shape, and of the size of the head of a mature fœtus. He at once made deep incisions into its substance, to accelerate its breaking down, and, by this means, he also evacuated some blood contained within it. On the following day he returned to complete the operation. The woman was placed on her back with the pelvis on the edge of the bed, the thighs separated and supported, as in a case of instrumental delivery. The forceps were introduced so as completely to grasp the tumour. It was then dragged down so low that the pedicle could be felt, which was then cut through with scissors, and the polypus removed. The uterus immediately returned to its natural position. No hemorrhage followed; and the woman,

previously in a deplorable condition, regained good health.—*Annali Universali de Medicina*, Oct. 1847.

231.—*Strumous Disease of the Uterus.* Dr LEVER.—In this woman, æt. fifty-eight, menstruation had ceased for some years, but for the last twelve months there had been some sanguineous discharge from the vagina at intervals of about a month. For some time before death, she complained of irregularity in the action of the bowels, with pain during their movement. She also complained of a feeling of bearing down, with pain over the pubis and in the hypogastrium generally. On examination per vaginam, the uterus was found slightly prolapsed, the os free from disease, the body enlarged. During the exploration she complained of no pain except when the womb was pressed back upon the rectum. An examination per rectum detected a tumour lying between the uterus and gut, which was extremely painful on the slightest touch.

On the post-mortem examination, a small tumour was found in the right mamma. It was covered with a thin glistening membrane, and, on being cut into, presented a red granular friable mass, like the cut surface of the spleen. A large tumour was found between the rectum and uterus, softening at one spot, and having a disposition to open into the gut. Internally it was of a light yellow colour in the centre, deepening into a dusky red towards the periphery. The uterus itself was large, having several irregularly rounded elevations on its surface. The parietes of the organ were thick, but not tough, and of a port-wine colour; and in them were found many whitish friable pinhead granules, evidently separated by the liquifying process from some masses in the uterine walls of the same character as the larger tumour. When gentle pressure was made on the fundus of the organ, a curdy matter escaped through the os. On opening the cavity, it was found to be occupied by a quantity of fluid similar to that which could be readily squeezed from a soft flabby spleen.—*London Medical Gazette*, April 14, 1848.

VII.—PSYCHOLOGICAL MEDICINE.

232.—*On the use of Protracted Baths in the Acute Forms of Madness.* By M. A. BRIERRE DE BOISMONT.—The following are the author's conclusions to two memoirs on this subject. 1st, The acute forms of insanity, and of mania in particular, may be cured in a period of time varying from one to two weeks.

2d, The treatment to be employed consists of baths (prolonged) and a continuous stream of water.

3d, The relaxation of the circulation and respiration, the introduction of a great quantity of water into the system, gradual and general cooling, demonstrate that these baths have an action essentially calming and sedative.

4th, The duration of the baths should in general be from ten to twelve hours; they may be prolonged to fifteen or eighteen hours.

5th, The stream of water should be kept up during all the time the bath is applied; it may be suspended when the patient is tranquil.

6th, The bath ought to be given at the temperature of from 28° to 30° C. (82° 86° F.), and the stream at 15° C. (43° F).

7th, Of the forms of mania, that which yields most to the action of baths and irrigations is acute mania; next follow simple acute delirium, delirium tremens, the madness of puerperal women, and monomania with acute symptoms; but in most of these forms, the cures are neither so rapid nor so permanent as in acute mania.

8th, The period of convalescence ought to be strictly attended to, in as much as relapses are by no means of rare occurrence, whenever the individuals are exposed to the influence of the same causes which have produced the disease.

9th, When acute mania borders on acute delirium, with an ataxic form, and rejection of drinks, the treatment is ineffectual.

10th, Chronic mania, or prolonge acute chronic mania, with agitations, have been improved but, not cured by this treatment.

11th, From the facts contained in the two memoirs, we may assert, that the cures of acute forms of insanity, and of mania in particular, are more numerous and expeditious by means of protracted baths and irrigations than those obtained by other treatments; since, whilst by the latter the medium duration of treatment is about six weeks, it is no more than eight days when baths and irrigations are employed.

12th, These baths, &c., appear to us to promise great benefit in cases of hysterical affections, and in many other nervous diseases accompanied by excitement.

13th, The prolonged baths have no inconvenience; the fatigue they may induce is easily dissipated; they do not deprive the system of any important principle; and they do not leave behind any of those confirmed debilities so often observed after abundant venesections, and the fatal termination of which has more than once been dementia.

14th, The employment of protracted baths is no novelty in science; but, till this moment, the mode of employment, which can be tried every where, has not been applied to the treatment of special cases. Their union with the stream of cold water, however, constitutes a new method.—*Gazette des Hôpitaux.*

233.—*Morbid Appearances found in the Insane.* By Dr Skae.—Of 28 bodies examined, 2 were cases of mania; 5 monomania; 2 delirium tremens; 13 dementia; and 4 general paralysis. Opacity of the arachnoid membrane was present in 15, of which 1 was a case of mania; and 1 of delirium tremens; 3 were cases of monomania; 6 dementia; and 4 general paralysis. Subarachnoid effusion was present in 3, viz., in 1 of the cases of monomania, and in 2 of those of dementia. In one of the cases of delirium tremens, the cerebrum presented an anemic condition; in two of the cases of general paralysis, it was of a violaceous tint; and in all the four it was adherent to the pia mater. In one case, small fibrous tumours were found in the choroid plexus; this was a case of dementia. In eight cases, no morbid appearances were appreciable in the brain, viz. in 1 of mania; 2 of monomania; and 5 of dementia. In several of the cases examined, it appeared to me that the cortical substance was diminished in depth, but the want of precise information as to the normal thickness of this portion of the cerebral substance, and the difficulty of determining with accuracy its precise depth in any one section that can be made, prevents me, as yet, from pronouncing a positive opinion on this point. The medullary substance was, in several instances, remarkably firm, and of a putty-like or somewhat leathery consistence, being firm, tenacious, and to a certain extent elastic. This was remarked in one case of monomania, but more particularly in several cases of general paralysis, so far confirming the views of M. Foville, that morbid changes in the white substance, consisting mostly in hardening, produced by the adhesion of the planes or fibres of the cerebral substance to each other, are directly connected with disorders in the motive powers.

In one of the cases of general paralysis, in which there was amaurosis, the optic nerves were found very distinctly atrophied along their whole course, as far back as their origin in the corpora geniculata.

In one of the fatal cases, in which death was occasioned by peritonitis, it was found that a strangulation of the ileum had taken place, by a loop of it having passed beneath a band of condensed cellular tissue, the result probably of a previous attack of peritoneal inflammation; sloughing had taken place above the strangulation, with extravasation of the contents of the bowel into the peritoneal sac.—*Physician's Annual Report of the Edinburgh Asylum,* 1847.

[We have often remarked that the lesions described in connexion with insanity, are exactly the same in their nature as those seen in a variety of other cases of cerebral disease. Whether, therefore, any morbid changes exist which are peculiar to mental derangement, is a point still to be determined. Nothing has so much surprised us as the fact, that no one, so far as we are acquainted, has ever attempted to observe the alterations which the minute structures of the brain undergo, with the microscope, in establishments for the insane. Assuredly if changes exist any where, it is only by such means they can be discovered. And yet the magnificent establishments scattered all over the country, and the splendid opportunities which exist for histological research on this most interesting topic, are rendered of no avail to the cause of science. The fact is, our different superintendents, instead of cultivating the domain of histology and modern pathology, have devoted their principal attention to statistics, which, although they lead to nothing, make a great appearance of exactitude, and look well in the report.]

234.—*Curious Cases in the Royal Edinburgh Asylum.* By Dr Skae.—An intelligent and industrious man, who has long occupied himself in the early part of each day with theological composition, and in the afternoons with active employment in the garden, had preserved a rigid and unbroken silence for a period of nineteen years. He lately succeeded in reasoning himself out of the delusions which led to this taciturnity, and after formally intimating in writing his desire to speak and explain his past conduct, which he accordingly did, he has since continued to speak freely on all occasions.

Two cases occurred, among many others, strongly illustrative of the power which the insane have, under the influence of strong motives, to conceal the delusions and hallucinations which they harbour; and, as this fact is interesting in a medico-legal point of view, they deserve to be recorded. In one, a female of very strong passions, there were a variety of hallucinations both of vision and hearing. People's faces appeared to her to change both their form and colour; she heard voices, and held converse with imaginary forms. Under the influence of an ardent wish to obtain her discharge, she declared that she had got entirely rid of all her false impressions; she even went so far as to explain that a lecture on ventriloquism, which was delivered to the inmates on one occasion, had been the means of explaining to her how she might have been deceived with regard to the fancied sounds. It would have been difficult for a stranger to have discovered in her any trace of insanity, yet, after maintaining her propriety of conduct, and preserving her secret for some time, she suddenly gave way to violent passion on finding that she was not immediately to obtain her liberation; and, in the midst of this ebullition, gave full indications that all her hallucinations still maintained their place in her mind.

The other case was one of still greater interest. It also occurred in a female, of amiable dispositions, fond of reading, industrious in her habits, and mild and gentle in her ordinary demeanour. She harboured the illusion that, although in her body and person she was J. A. L., yet, that her body was the actual residence of the Divine Spirit which had been incarnate in our Saviour, and was now incarnate in her. With singular inconsistency, she wrote a novel, and at all times readily joined in the song or the dance. An attempt was made, by powerful moral agency, to uproot the delusion, and apparently with perfect success. She for a time defended her position with great obstinacy and cleverness, and seemed immovable; but the combined influence of reasoning, ridicule, and addresses made to her other intellectual and moral faculties, at last led her to renounce and repudiate her illusion. She came herself to look upon it with ridicule, and appeared to be completely free from its influence. Some time afterwards, when preparations were being made for her removal, the disappointment of some expectations which she had been led to entertain regarding the kindness of her friends on leaving the Institution, brought back all her former symptoms, combined with others of a similar character; and from her own statement in subsequent conversations, it appeared almost certain that her illusions had never really been dispelled, but were only held in abeyance and concealment for the purpose of gaining esteem, and obtaining her discharge.—*Physician's Annual Report of the Edinburgh Asylum*, 1847.

235.—*On the Use of Chloroform and Ether in Puerperal Insanity.*—As it is a great object to break the *continuance* of the sleeplessness of insanity, the occasional use of the *chloroform* vapour will be found valuable. We have had an opportunity of seeing more than one case in which it not only induced sleep, which had previously been absent for four or five nights and days, but the patient, on recovering from its effects, was found to be quite tractable and free from violence. The inhalation of ether had been tried by M. Cazenave of Pau, in the case of a lunatic female who had rested neither night nor day for five months, and in which it induced tranquillity. M. Jobert, in a similar case, exhibited it with the good effect of inducing sleep, and restoring, temporarily, a state of rationality. M. Bouvier tried ether, also, in a case of puerperal mania, with very beneficial results. In this case there had been no sleep for a fortnight before using the ether; its use was followed on two occasions by "*un calme de quelques heures.*" We are bound, however, to add, that in some cases in which it had been tried by other practitioners, no beneficial effect was produced.—*Journal of Psychological Medicine*, April 1848.

236.—*True Religion not a Cause of Insanity.* By Professor IDELER.—An important distinction is to be drawn between these deranged affections of the mind resulting from the influence of false religion upon the understanding, and the healthy effect of legitimate Christianity upon the feelings and actions of man. During the course of our experience, we have never seen a case of insanity which could be clearly traced to true religion—we mean, the religion as inculcated by the great Author of Christianity—the religion that teaches 'peace and good-will towards men'—which advocates the noble sentiments of love and charity—which inculcates the feelings of 'preferring others to ourselves'—the religion which represents LOVE, MERCY, and FORGIVENESS as the pre-eminent attributes of the Godhead—the religion whose tendency is to

induce us to take lowly views of ourselves, to humble human pride, to produce a cheerful, serene, and happy state of mind —the religion which enables us to bear with fortitude 'the whips and scorns of time, the oppressor's wrong, and the proud man's contumely.' We cannot believe that the influence of such a religion can be otherwise than sanitary in its effects on the human mind.—*Journal of Psychological Medicine*, April 1848.

237.—*Hereditary Insanity.* By Dr Rud. Leubuscher.—Is mental disease transmitted more frequently from the mother than the father? This question, considered in its strictest sense, might show that insanity depends mostly upon conditions which are either limited to the mother or father exclusively; that it is connected with this or that system and organ; or, finally, that the influence of one or the other parent predominated in the act of procreation. We thus see how a question of this nature opens the way to a whole series of others, and how cautiously we ought to proceed in giving a decisive reply, lest we involve ourselves in a mass of hypotheses, in our attempt to explain the subject under consideration. Even Esquirol established the proposition, that mental disease was more frequently transmitted from the mother than the father—an opinion that has continued in force, and has been very nearly considered as a settled fact, by Baillarger. Another point, tolerably well attested by experience, and scarcely to be refuted on theoretical principles, has again been generally advanced—namely, that insanity is not so frequently transmitted to the offspring when it does not show itself in one or the other parent until after the birth of the former, excepting where the disease is based on hereditary disposition, and appears to have been simply retarded in its manifestation. It would be very important to learn how far it is necessary to extend our investigations amongst the relatives of a patient, and through how many generations the disposition may be transmitted: but these are points into which statistical inquiries do not, and cannot enter.—*Journal of Psychological Medicine*, April 1848.

238.—*Influence of Events and Political Emotions on the Development of Mental Alienation.* By M. Belhom.—In a memoir read to the Academy of Medicine in Paris on this subject, M. Belhom arrived at the following conclusions. That one of the moral causes which influence the development of mental alenation is, without doubt, the perturbations which revolutions give rise to; that insanity attacks most frequently individuals predisposed; that its form is acute, and consequently more susceptible of cure; that the treatment which succeeds best, is a sedative treatment, and especially prolonged baths with cold affusions on the summit of the head; that derivatives from the intestinal canal and skin cause a favourable termination; and, lastly, that a moral treatment well regulated favours cure.—*Gazette Médicale*, May 3, 1848.

239.—*Frequency of Gangrene of the Lungs among the Insane.* By Dr Fischel of Prague.—In the course of six years (1840-1845) there were examined in the Pathological Theatre at Prague 3437 bodies, of which 3102 were from the hospitals, and 335 from the asylum for lunatics. Among the former, gangrene of the lung occurred 55 times, viz. in 1·6 per cent. of the cases; in the latter 25 times, viz. 7·4 per cent. This proportion is the more trustworthy, that it is pretty nearly the same in each of the six years referred to.—*Präger Vierteljahrschrift*, 1847. Band 1.

VIII.—MATERIA MEDICA AND THERAPEUTICS.

240.—Chloroform. *Preparation.* By Professor Bottcher.—Equal parts of chloride of lime and acetate of soda are distilled to dryness in an iron retort. But little chloroform is obtained in the first distillation; but a large quantity of dilute acetone, which is mixed with chloride of lime, and again distilled. But the whole acetone is not decomposed in this operation, and it is consequently necessary to mix the products with more chloride of lime, and to distill again. The product is rectified over caustic lime. This method is said to effect a great saving.—*Polytechnische Notiz-Blatte*, No. I., *and Chemical Gazette*, No. 132.

Properties.—According to Dr Dubini, chloroform possesses remarkable antiseptic powers, and is well adapted for the conservation of anatomical and pathological preparations; the colour, form, flexibility, and volume of which it retains. His observations cannot be considered as satisfactory, as they embrace too short a

period, only a few weeks; but this property probably merits further investigation.—*Gazzetta Med. Lomb.* 10, 1848, and *L'Union Méd.*

Physiological Action. Dr Snow attributes the greater activity of chloroform compared with ether to its sparing solubility in water. He has examined a number of volatile liquids, and has found that their narcotic power is in an inverse ratio to their solubility in water. The more soluble the agent is, the greater is the quantity of it required to produce a given effect. The following table exhibits a number of the liquids in the order of their solubility, and of their narcotic strength—the last being strongest:—

Alcohol, Pyroxilic Spirit, Acetone,	soluble in all proportions.
Acetate of Oxide of Methyle,	50
Acetate of Oxide of Ethyle,	15
Sulphuric Ether,	10.....2300
Nitrate of Oxide of Methyle,	6
Iodide of Ethyle,	1
Chloroform,	0·5.....144
Bromoform,	about the same.
Bichloride of Carbon	0·4.....100
Bisulphuret of Carbon	0·13.....50
Benzin, Metacetone,	also very sparingly soluble.

The first column shows the quantity of liquid by measure, that 100 parts of water would dissolve; the second the quantity of vapour.

Dr Snow ascertained the relative strength of these vapours by inhaling small quantities himself, and by experiments on animals.

According to Dr S., the full narcotic effect of chloroform will not be obtained unless the air inspired contain at least one cubic inch of chloroform vapour for every hundred cubic inches of air. If, from any cause, the proportion of vapour become less, no amount of its consumption will produce the desired effect.—*Med. Gazette* for April.

Dr Flagg concludes, from numerous experiments with *sulphuric ether*, that there is a particular point of etherization which leaves the patient in possession of all his faculties except the sense of pain; and more especially the sense of touch, and the power of distinguishing temperatures are as acute as under ordinary circumstances. He considers this fact a strong argument in favour of the view of a double system of sensory nerves; "one to carry to the brain the idea of *touch*, the other of *pain*."—*American Medical Examiner*, Jan. 1848.

Dr Nevins considers, that as the general safety and utility of chloroform is now completely established, it is useful to direct attention to its occasional *unfavourable effects*. He has received communications respecting its action from several public hospitals, as well as from many private individuals, from which it appears that *vomiting* is frequently present, and may occur, although the stomach is at the time of administration quite empty. *Headach* was another not uncommon result, continuing in some cases for several hours. *Convulsions* of variable severity are said to have been very frequently present, but never occasioned any permanently injurious effects. They usually occur at an early period of its administration, and disappear when narcotism is completely developed. In some cases, however, they are present, while the patient is fully under its influence. *Prostration* occurred to an alarming degree in several instances, but all recovered ultimately. In one or two cases, on the other hand, in which the patients were reported to have been pulseless and moribund from uterine hemorrhage, or prostration otherwise induced, they rallied under the influence of chloroform, and operations were safely performed. The risk of *secondary hemorrhage* was not increased by the use of chloroform.

Children may be submitted to its influence with safety. Dr Roche operated satisfactorily for nævus upon a child not three months old, to whom he had given fifteen drops of chloroform; it continued under its influence six minutes. The report of a successful operation upon an infant six months old, is referred to by Dr Nevins.—*Med. Gazette*, March 3.

Fatal Cases.—In a discussion on the use of chloroform in midwifery, which took place at the Westminster Medical Society on the 22d of April, Dr Reid stated that he was aware of its having proved fatal to a lady to whom it had been administered on account of neuralgia.—*Lancet*, April 29. The "Cincinnati papers stated that a post-mortem examination was made in the case of Mrs Simmons, who died while under the influence of chloroform. The body was found in a healthy condition, and showed no indications of any disease that could have caused her death." It was supposed to have been administered in too concentrated a form.—*Lancet*, April 15.

Dr Glover has replied to Dr Simpson's remarks on the cause of death in the case of Hannah Greener (see *Retrospect*, p. 50).

He has made comparative observations on animals killed by the inhalation of chloroform and by drowning, from which it appears, (1) that the blood is not necessarily fluid in the heart in asphyxia produced by drowning, nor is it always coagulated in death from poisoning by chloroform; (2) that reddening of the larynx and epiglottis, and congestion of the brain, may occur in chloroform poisoning, and are not characteristic of asphyxia from drowning; (3) that the post-mortem appearances in both cases are very similar, with the exception of the pulmonary congestion, which is denser, more uniform, and of a lighter red colour in animals killed by chloroform. Dr Glover still maintains that the girl died from "congestion of the lungs, occasioned by the inhalation of chloroform."—*Lancet*, April 22.

Therapeutic Action. Four cases of *delirium tremens* are referred to by Dr Nevins, in all of which chloroform produced the best results, the patients immediately fell into a tranquil sleep, which lasted from one to four hours.—*Med. Gaz.*, March 3. It failed, however, to give relief in a severe case detailed by Dr Hooper.—*Lancet*, April 1.

In *mania* Dr Nevins observes, that experience has not been so favourable. Two of his informants mention having used it with benefit in three cases of high maniacal excitement. In about twelve other cases reported to him, no permanent benefit, and scarcely even temporary relief, was obtained.

Mr Sibson has employed it in several cases of facial *neuralgia*. The pain usually disappeared before unconsciousness was produced, and on its return was readily removed by a second inhalation. The chloroform was useful, not in curing the disease; but in aiding the effect of other means, as quinine, belladonna, &c., the employment of which was directed according to general principles. When the neuralgia arises from, or is associated with cerebral affection, choloroform is contra-indicated, according to Mr Sibson's experience.—*Med. Gaz.*, April 1848. Mr Moffat failed to afford even temporary relief in a case of severe neuralgia of the neck; but we suspect that an inferior preparation was employed. Two cases of tic douloureux are referred to by Dr Nevins, in which it was used with immediate relief, and no return of the pain for several days.—*Med. Gaz.*, March 3.

No advantage has been derived from its employment in two cases of *chorea*.

In the case of a female, forty-three years of age, affected with *catalepsy*, its employment was highly serviceable, enabling the practitioner to administer medicine by the mouth, which was previously impracticable, on account of the existence of trismus. She had been in the cataleptic state for sixteen hours, and turpentine enemata, &c., had failed in obtaining improvement. Under the chloroform, the iris regained its mobility, and the limbs, with every voluntary muscle in the body, became obedient to the will. She again relapsed into her former state; but from that time gradually recovered.—*Prov. Med. Jour.*, April 19.

Two cases are detailed of its successful employment in *puerperal convulsions* (Fearn, Richet), and we have heard of several others. We regret our inability to quote a second cure of *acute traumatic tetanus* by its means. In one case it palliated the distressing symptoms, and afforded much relief to the unfortunate patient.—*Prov. Med. Jour.*, April 19.

Taken internally in the dose of five to fifteen drops, mixed with mucilage, Dr Nytterhœven found it useful in combating the wakefulness which accompanies the chronic complaints of old people. It provokes quiet sleep, without occasioning cerebral congestion, diminishes to a slight extent the force and frequency of the pulse, and neither disorders the stomach nor constipates the bowels. After a few days' use, the dose must be increased to obtain the same hypnotic effect.—*Archiv. de Méd. Belge*, January 1848.

241.—*Clinical Notes taken in the Hospitals of Paris and Vienna.* By Dr Alex. Fleming.—*Administration of Calomel in very small and frequently repeated doses (à doses réfractées).*—In the wards of Professor Trousseau, at the Hôpital Necker, Paris, I had frequent opportunities of witnessing the complete success of the following method of administering calomel. In *acute* diseases, as rheumatic fever, puerperal peritonitis, iritis, &c., a mixture of one grain of calomel and one drachm of sugar is divided into twenty-four powders, one of which is taken every hour. The same treatment is continued two, three, or more days, or until the gums are touched. This usually occurs in forty-eight hours, and sometimes even in twenty-four hours, or after the administration of only one grain of calomel. It is rarely necessary to continue the use of the powders during the third day.

The advantages of this method are—(1) the system is brought under the influence of mercury as rapidly and as certainly as by any other mode of administering the drug; (2) the mercurial action

never proceeds further than is intended, and the serious consequences of excessive salivation are entirely avoided. The therapeutic effects of calomel, when thus given, are in every respect similar to those obtained by large doses (Trousseau, Dubois).

In the treatment of puerperal fever, Professors Trousseau and Velpeau insist strongly on the necessity of rapidly inducing mercurialism. With this view, large doses of calomel were administered internally, and, at the same time, mercurial ointment, to the extent often of a pound daily, was rubbed into the skin. Although they had reason to believe that this heroic medication frequently saved the lives of their patients, they had often to deplore the baneful effects of excessive mercurial action; viz. gangrenous inflammation of the vulva, serious lesions of the mouth, &c. For the last two years, Trousseau has adopted the method *à doses réfractées* in the treatment of this disease, and is convinced that he thus obtains all the good, and completely avoids the evil effects of the remedy.

In *chronic* diseases, or where it is desired to bring on mercurialism gradually, the same dose (1-24th of a grain) may be given every third or fourth hour, when tenderness of the gums will probably not appear before the fifth or eighth day.

In the treatment of constitutional syphilis, lupus, &c., Hebra of Vienna prescribes corrosive sublimate in a similar manner. One grain of the bichloride is dissolved in twelve ounces of water, and of this solution half an ounce is taken thrice daily. In the cases which I observed of this mode of treatment, salivation presented itself rarely before the eighth day, more commonly about the eleventh or twelfth day.

The merit of having first directed attention to this mode of administering calomel is due to Dr Law of Dublin, whose paper on the subject, which appeared in 1839, seems not to have attracted much attention in this country. Dr Douglas Maclagan informs me, that he has had occasion more than once to verify the statements of Dr Law. I have myself, during the last six months, adopted the practice in about twelve instances with success, in so far as regards the physiological action of the drug.

I think it right to place in connexion with the above, the views of Mialhe on the changes which calomel undergoes in the stomach previous to absorption, and which certainly enable us to understand the *modus operandi* of Law's method of exhibiting calomel.—(*Traité de l'Art de Formuler*, p. 5.) It has long been known, that, placed in contact with a solution of an alkaline chloride, as common salt, accompanied or not with muriatic or other acids, calomel undergoes a partial transformation into the bichloride and metallic mercury, and as calomel itself is insoluble, and consequently incapable of absorption, we must attribute its remote physiological action to this change.

The interesting experiments of Mialhe show that the quantity of corrosive sublimate formed, bears no proportion to the amount of calomel employed; but is in exact relation to the quantity of alkaline chloride present in the solution.

Thus, the quantity of alkaline chloride present in the stomach at any one time, being generally not more than sufficient to convert a very small quantity of calomel into bichloride, it is immaterial, in so far as absorption is concerned, whether one grain or one drachm of calomel is administered, as in either case the quantity of bichloride formed is the same. The frequent administration of small doses, as in Law's method, has the advantage of exposing the calomel to the action of a large quantity of the gastro-intestinal fluids.

According to this view, the exhibition of common salt with the calomel ought to increase its activity in a marked degree, and perhaps the cases of so-called idiosyncrasy, where a small quantity of chloride has given rise to severe salivation, may find in this circumstance a rational explanation. On the other hand, the changes in chemical composition which the gastro-intestinal fluids undergo during disease, will modify powerfully the action of calomel. Ptyalism is said to be easily induced in seamen. Is this owing to an excess of chloride of sodium in their gastric and intestinal fluids, on account of their eating salted provisions? The difficulty of salivating children at the breast, by the exhibition of calomel, is well known. Mialhe ascribes this to the feebly saline nature of their aliment.—(*To be continued.*)

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

VOL. I. JULY, 1848. No. VI.

I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

242.—*On the Minute Anatomy of the Thyroid Gland and Supra-renal Capsules.* By Professor ECKER of Basle.—On making a section of the *Thyroid gland*, it is found to consist of rounded solid granules or lobules, visible to the naked eye, of a reddish-yellow colour, and from one-fourth to half a line in diameter. These bodies, with a loose cellular tissue which encloses them in its meshes, but from which they can easily be separated, constitute the entire apparent structure of the gland. On making a thin section of one of these bodies, and placing it under the microscope, it is seen to present an areolar tissue, consisting of numerous bundles of fibres passing in all directions, crossing each other frequently, and enclosing in its meshes round or oval closed vesicles, which are evidently the most important part of the glandular structure. Along with the fibrous tissue are numerous vessels, whose capillaries form a network in close approximation with the external surface of the vesicles above mentioned. These vesicles are formed by a delicate and structureless membrane, which is completely closed on every side; they have a diameter of from 0·05 to 0·10 of a millimetre. Their contents consist of free fatty granules and oil globules, along with granular nuclei or cytoblasts, and occasionally complete cells. Reference will presently be again made to these structures.

The *Supra-renal Capsules* are surrounded by a fibrous investment, copiously supplied with blood-vessels, which pass every where into the gland. On section they appear composed of two substances, the cortical and the medullary. The latter contains the greater number of vessels, and in its centre is the wide supra-renal vein.

The cortical substance of the gland is made up almost entirely of closed glandular sacculi, enclosed in the areolæ of fibro-cellular tissue, in the midst of which run the blood-vessels and nerves. These sacculi are placed together in rows or columns, which are arranged parallel to each other, and disposed in a direction radiating from the capsule of the gland to its central or medullary substance. These rows of sacculi are collected into compartments, which are separated from each other by the above-mentioned bands or septa of fibro-cellular tissue. The appearance presented by this arrangement of the sacculi in columns, is as if each row constituted a single tubule; but by lacerating one of the fibrous septa forming the compartments, some of these apparent tubules will often break up into several portions, each of which is then perceived to be a distinct sacculus. It is merely by their aggregation into columns, therefore, that the tubular appearance is produced. Moreover, several of the individual sacculi may be sometimes observed scattered apart singly, in an undisturbed section of the cortical portion of the gland. These lie especially at the periphery, and at that part of the cortical portion which adjoins the medullary portion. These scattered sacculi have been sometimes taken for the closed and rounded extremities of displaced tubules.

All the sacculi, both those which are isolated and those which are aggregated into rows, present when examined separately a rounded or oval form. The smallest measure from 0·017 to 0·022 of a millimetre; the large oval ones from 0·062 to 0·125 in length, and from 0·025 to 0·0062 in breadth. The membrane of which each sacculus is composed is frequently quite distinct without the addition of any reagent, though, if obscure, its presence may be in all cases rendered manifest by the addition of potash. It is a simple structureless layer. The contents of each consist of a fine molecular

substance, of nuclei and nucleated globules imbedded in it, and of granules of fat. The presence of the latter gives a peculiar yellowish appearance to the sacculus, which is thereby strongly contrasted from the medullary portion of the gland. In the smallest of the sacculi, which are situated near the margin of the medullary substance, there is observed only a single nucleus, imbedded in finely granular plasma. These sacculi thus resemble simple cells, though they differ from the cells in the parenchyma of the medullary portion of the gland, and from the nucleated globules in the interior of the larger sacculi, in being larger, and in not losing their membrane by the action of potash, which the latter cells do. The larger sacculi contain two, three, or four nuclei; the largest of all contains as many as twenty, or even more. These different forms probably only represent so many different stages of development from a single nucleated cell. The large number of nuclei in the bigger ones probably arises from an endogenous formation of them as the cells grow, and are developed into true sacculi.

The *medullary portion* never contains sacculi, either in man, or in any mammalian except in the horse, in which animal the author has met with them. It is essentially made up of a network of fibres, derived from the bundles of fibro-cellular tissue which were mentioned as proceeding from the capsule of the gland. In the meshes formed by this network are contained a large quantity of the before-described finely granular or molecular material, together with nuclei and nucleated globules imbedded in it. Blood-vessels and numerous nerve-fibres are distributed through the medullary substances.

It appears from the above description, that both the thyroid gland and the supra-renal capsules consist essentially of a structure similar to that of all true glands, viz. a homogeneous membrane in contact with nuclei and cells. This membrane does not, however, communicate with any excretory duct, as is commonly the case in glands. In the thyroid body it assumes a simple vesicular form; in the supra-renal capsules a similar membrane is disposed in the form of elongated sacculi. [In the thymus gland, as Mr Simon has shown (*Physiological Essay on the Thymus Gland*, 1846), a similar structure exists in the more complicated form of an elongated tube, into which open numerous ramified follicles.] In the spleen, a vesicular structure exists, and, although a special limiting membrane has not been in general recognised, the author has succeeded in demonstrating it, in mammalia and birds, by means of the application of potassa, which dissolves the obscuring granular matter. It may therefore be assumed, that the whole of the so-called vascular glands possess essentially a secreting structure.

The cells and nuclei appear to be at first in contact with the membrane, and afterwards to be separated from it, and to float free in the fluid. The complete cells are generally few in number, the free nuclei very numerous. The nuclei are slightly dotted or granular; they have a size of from 0·01 to 0·005 of a millimetre in the supra-renal capsules, and 0·007 to 0·005 in the thyroid gland. In the supra-renal glands of the embryo, they have been observed by Dr Ecker to be vesicular, and to contain nucleoli. When there are complete cells, they have a diameter in the supra-renal capsules of 0·017 to 0·020, in the thyroid gland from 0·010 to 0·012. The space between the cell-wall and the nucleus is often filled with granules.

Similar forms of cell development have been described by Simon, and observed also by Ecker in the thymus gland; and the nuclei in the spleen have been very frequently observed. The cells and vesicles of the thyroid gland are liable to undergo enlargement, constituting, according to Ecker, one of the forms of bronchocele.—*Henle and Pfeufer's Zeitschrift*, 1847, Heft. 2; *also Medical Gazette*, No. 159, *from Ecker "Der feinere Bau der Neben-nieren beim Menschen und den vier Wirbelthierclassen,"* 1846.

[We propose next month returning to the subject of the thyroid gland, in order to give a sketch of Dr Ecker's observations on bronchocele, which are extremely original and important. The above anatomical observations are fundamentally the same as those of Mr Simon, in his work on the thymus gland, in some remarks on the structure of the other vascular glands.]

243.—*On the Physiology of the Glands without Ducts, or so-called Vascular Glands.* By Professor ECKER.—The author conceives the supra-renal capsules to have a function in common with all the other glands without ducts. The anatomical analogies of these bodies have been fully shown in the preceding article. They all possess as an essential structure a basement membrane, with cells and nuclei which have all the appearance of secreting structures; and the contents of

the ultimate vesicles or tubes is in all cases a highly albuminous fluid, containing fatty granules and free oil-globules. Dr Ecker has no hesitation in considering this a secretion which is destined to be returned to the blood, either through the lymphatics, or, as is more probable, directly through the walls of the vesicles. Here lies the distinction between these bodies and the ordinary glands, whose secretions, with the exception of the bile, are destined for excretion, and contain only effete matter. The bile serves an important purpose in relation to digestion; and it has been supposed that the spleen, thymus and thyroid glands, and renal capsules, have some such accessory office in connexion with other special functions. Ecker considers this hypothesis to be founded on imperfect analogies, and is rather disposed to attribute to them a common function in connexion with the process of nutrition. The fluid secreted by them is rich in nutritive elements; and the abstraction of these from the blood, to be returned to it again, is not difficult to understand if we consider that the supply of the elements of nutrition to the blood is variable, while the demand is constant; on which account there may be a necessity for organs in which these nutritive principles are stored up, so as to be constantly ready to supply the waste of the tissues. [Is it not more probable that, in the act of secretion, some chemical change is produced in these elements, which is required to fit them for the act of nutrition, but which has hitherto escaped our observation?] — *Medical Gazette*, No. 160.

244.—*On the Function of the Pancreas.* By Cl. Bernard.—The pancreatic secretion is limpid, viscous, and alkaline, and in all its general properties approximates closely to saliva; in a physiological point of view, however, its properties are entirely different. From researches detailed in the paper, the author concludes that the pancreatic juice is the indispensable agent in the digestion of fatty matters. He has found that, when mixed with oil or any other fatty body, it immediately produces an emulsion, a property which is not possessed by saliva, bile, serum, or any other animal fluid. This first action is not a saponification or combination, and appears to be perfectly mechanical; but it does not stop here, for, after a time, a further change takes place, and the fats are decomposed into their fatty acids and glycerine, a change which the author has fully established by experiments made along with MM. Barreswil and Marguerite.

Bile does not produce any emulsion with the fatty bodies, and has no action upon them so long as they are *neutral*; but it is capable of rapidly dissolving the fatty acids, and the well-known power which bile possesses of removing grease spots, is due, in all probability, to the previous decomposition of the fats by exposure to the air. Owing to these properties, a mixture of bile and the pancreatic juice, such as is found in the duodenum, has the double property of dissolving the neutral acid and fats. The author has also examined these points by tying the pancreatic ducts in the dog and rabbit; and he found that, after the operation, the chyle contained no fatty matters, although these substances were supplied with the food, and were found in abundance in an unemulsionated state in the intestines.—*L'Institut*, May 3, 1848.

245.—*On the Chemical Phenomena manifested by different Substances introduced into the Organism.* By M. Bernard.—The author has performed a very extensive series of experiments, of which the conclusions may be stated shortly as follows:—

1. Certain combinations of metals, which take place readily out of the body, and even in the gastric secretions, are prevented from occurring in the blood, and other animal fluids, by the affinities of the metal for organic matter. This proposition was drawn from observations on the reactions of a salt of iron with prussiate of potash.

2. Certain chemical reactions of the nature of fermentation (*e. g.* amygdaline with emulsine, sugar with yeast), which commonly do not take place in the stomach, are easily developed in the blood.

3. When salts of certain acids, whose affinity for bases is feeble (as the hydrocyanic and the carbonic), are injected into the veins, they are decomposed, and the acid is liberated; the decomposition in these cases appearing to take place in the capillaries of the lung.

4. Certain salts (such as the prussiates of potash and the salts of iron) appear to pass in the stomach from a lower to a higher, and in the blood and urine from a higher to a lower, state of oxydation.

[The extreme interest attaching to M. Bernard's individual experiments, induces us to give an analysis, in the present and the next Number, of such of them as appear to lead directly to the above results.]

First Series.—After a number of expe-

riments, which were vitiated by the difficulty of procuring a salt of iron which could be injected in the veins of an animal without fatal consequences, M. Bernard discovered that the lactate of iron was quite innocuous when used in this way. He then caused a simultaneous injection of lactate of peroxide of iron, and of prussiate of potash, to be thrown into different veins in the same animal. The result was surprising. Instead of the blue colour, which might have been expected, the blood and the tissues of the body experienced no apparent change whatever; the only exception being the pyloric extremity of the stomach, where a vivid blue colour was developed. The experiment was repeated several times, with similar results. In one instance only the urine presented a dingy blue colour; in all the experiments, however, a few drops of strong sulphuric acid added to the urine produced a copious precipitate of Prussian blue. These results were not affected by the acid or alkaline character of the urine itself.

The conclusion from these experiments was, that the double decomposition here indicated could only take place in two situations, viz. in the stomach, and occasionally to a slight extent in the urine. That the absence of the blue colour did not result from the insignificance of the quantities employed, was proved by another experiment. Into the veins of one rabbit the ordinary quantity of prussiate of potash in solution was thrown, and after some minutes the animal was bled. In another rabbit lactate of iron was injected, and bleeding likewise performed. On mingling the serum derived from these two rabbits, no reaction took place; nevertheless the one serum was easily proved to contain iron, and the other prussiate of potash. On adding now to the mixed serum of the two animals a few drops of sulphuric acid, the blue precipitate was instantly produced. The action of the urine of the two rabbits when mingled, was precisely similar to that of the serum. It was different, however, with the gastric fluid. On washing the coats of the stomach in the two animals, acid liquids were procured, which, on being mingled, gave rise to a blue colour immediately.

That this difference between the gastric and the other fluids was not due solely to acidity, was shown by the fact, that the urine presented the same phenomena, whether acid or alkaline, as above stated.

Having determined these facts, M. Bernard next proceeded to try the effect of the direct addition of the salt of iron, and afterwards of the prussiate of potash, to serum, urine, and gastric juice. In the first two he found that, except in the case where an acid was added, or large quantities of the re-agents used, there was no blue colour always appeared. When, however, the precipitate of potash was added first to the fluids, and afterwards the iron salt, the blue colour was immediately produced in the whole.

M. Bernard accordingly concluded, that from the attraction of iron for animal substances, it is prevented from developing its usual relations with prussiate of potash, when both these substances are injected into the blood; but that if a strong acid be added to animal matter containing these salts, this affinity for the animal matter is destroyed, and the several chemical relations are established. This does not take place, however, on the addition of phosphoric, acetic, or lactic acids.

The peculiarity of the gastric juice in these experiments is explained by the author, on the ground of the small quantity of organic matter in it being less than any other secretion in the body. [May not the existence of free muriatic acid be a more valid explanation?]

The tendency of iron to combine with the tissues, is further illustrated by M. Bernard in three experiments. In the first, a solution of lactate of iron was introduced into the cellular tissue of the neck, and a similar quantity of solution of prussiate of potash into the right thigh. A blue colour soon became developed in the former situation, while the thigh retained its natural colour. In the second experiment, the salt of iron was introduced into the thigh, and prussiate of potash was injected into the veins; the blue colour became developed in the thigh. In the third experiment, the salt of potash was introduced into the cellular tissue, and the iron-salt into the veins. In this case there was no blue colour developed.

It is obvious from these experiments, that the prussiate of potash circulates rapidly in the general mass of the blood, even when introduced into the system by a wound in the integuments; while the iron seizes on the tissue with which it is placed in contact, from which it is very sparingly absorbed into the circulation. Thus the mixture of the two salts is not effected, except at the point of introduction of the iron.—(*To be concluded in next Number.*)—*Archives Générales de Médecine*, Jan. 1848.

246.—Lesion of the Anterior Lobes of the Brain without Alteration of the Faculty of Speech. By M. Kemmerer.—A man attempted to commit suicide by firing a pistol against his forehead. He was found leaning against a wall, and answered questions by the words "let me sleep" (laissez-moi dormir). When seen by the authorities, he was asked who did him the injury? he replied, "It is the son of ——." He was asked for his arms, and replied distinctly that he had none; but in answer to further inquiries, he admitted having two pistols, and gave them up. Next day, having been reminded of his declaration as to the son of ——, he explained that he had intended to say, that without him he would not have been reduced to such extremities.

There was severe pain at the mastoid processes, which yielded to the application of leeches. Intelligence, motion, sensation, deglutition, were intact.

The next day the patient entered into conversation, and was able to rise to make water; but at six o'clock he gradually fell into coma. There was spasmodic contraction of the arms. Next day this continued, and he died in the evening.

There was a perforation of the frontal bone, close to the root of the nose; it was exactly filled by a metallic disk, with a smooth surface. On opening the cranium, the two anterior lobes of the brain appeared entirely destroyed, and converted into a sanguinolent mass. The membranes were torn around the perforation, and the bullet was prolonged into the brain in the form of a conical point. A clot of blood was extended along the falx cerebri. There was no other lesion.—*Gazette Médicale*, No. 24, *from Journ. des Connaissances Médico-Chirurgicales.* [This case is of considerable importance in connexion with the view of M. Bouillard as to the function of the anterior lobes of the brain. See *Retrospect* for March, p. 46.]

II.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

247.—On Some Points connected with the Origin of Uric Acid Sediments in the Urine. By Dr G. Zimmermann.—The subjects considered by the author are: First, The source of amorphous sediments of urates; second, The cause of their production; third, The origin of sediments consisting of uric acid in its crystalline state; fourth, The reason why urine is frequently rendered turbid by the addition of an acid, and subsequently deposits crystals of uric acid.

First, Dr Heintz in 1845 observed that amorphous sediments never contain any free uric acid, but consist of urates of ammonia, soda, potash, lime, and magnesia. The existence of urate of lime, he infers from having found carbonate of lime in the burnt ash of the sediment. Dr Zimmermann at first called in question the presence of this salt in such sediments, thinking that the existence of oxalate of lime (which he had frequently known such sediments to contain) would explain the presence of carbonate of lime in the ash after combustion; the oxalate, like the urate, being convertible by heat into the carbonate. The result of the following experiment subsequently induced him to change this view:—360 grammes of lateritious sediment were obtained from the urine of several patients, and then digested with acetic acid. The acid combined with the bases of the urates, precipitating the uric acid in crystals, together with oxalate of lime; after filtering the liquid and neutralizing it with liquor ammoniæ, the addition of oxalic acid showed the presence of a very large quantity of lime. No phosphate of lime being present in the lateritious sediment, the lime must have existed in the urine in combination with uric acid. The oxalate of lime, associated with the amorphous deposits, is not present in the urine when first voided, but oxalic acid being formed out of uric acid, then combines with lime; a portion of lime also exists in combination with the colouring matter. [We doubt whether the oxalate of lime will be found as invariably in these deposits as Dr Zimmermann states in this paper. At the same time we have detected crystals of oxalate of lime immediately after micturition, in urine in which, after a brief period, we have found them associated with amorphous urates in the deposited sediment. In some instances, doubtless, the subsequent chemical change referred to may account for their presence.] The chief circumstance urged by Heintz in favour of uric acid never existing in lateritious sediments in its free state, unless when crystalline, rested on the fact of uric acid always appearing in its crystalline form when deposited from a urate by the action of a stronger acid. This is not altogether correct, for, on slightly acidulating the solution of a salt of uric acid, the latter is invariably thrown down

amorphous, and remains so; even if a large quantity of acid is added to the solution of a urate, it is still deposited amorphous, though crystals of uric acid afterwards form. This may be observed under the microscope. The existence of free amorphous uric acid can only be determined indirectly; viz. by ascertaining whether the amount of bases obtained from the sediment corresponds to the amount of uric acid found. A second circumstance urged by Heintz against the existence of free amorphous uric acid in such sediments is, that when uric acid is added to urine freed from amorphous sediments by filtration and then heated, a portion of the acid is dissolved, and on the urine cooling appears in the form of a urate. It is, however, probable that this base does not exist in the urine previous to heating, but that the effect of the increased temperature is to decompose a portion of urea, and so generate ammonia. Heintz thinks that urate of lime when solid is always amorphous. According to Heintz and Dr Bence Jones, urate of ammonia admits of deposition in an amorphous condition from a solution containing chlorides of ammonia and sodium; but in so far as a lateritious deposit very frequently takes place in urine which scarcely contains one part in 1000 of dry chloride, it appears doubtful whether in these cases the chlorides are to be regarded as the cause of the amorphous condition in which the urate of ammonia is deposited. The deposit of this salt, which takes place when a heated solution of it is cooled, is invariably amorphous. When urate of soda, which ordinarily appears in a crystalline form, assumes the amorphous state in lateritious sediments, it is believed by Heintz and others to be due to the presence of chloride of sodium; in many cases, however, too small a proportion of this exists in the urine to account satisfactorily for this chemical interchange. We are not yet sufficiently acquainted with the influence exercised by the different constituents of the urine, particularly by the colouring matter, on the form assumed by the salts of uric acid while being precipitated.

Secondly, The determination of the causes which lead to the deposition of the urates in the form of a sediment, is a subject of much importance, involving, as it does, the explanation of the origin of sediments composed of crystals of uric acid, and the reason why lateritious sediments themselves sometimes change into uric acid crystals. Although by the theory of Liebig, which is adhered to by Heintz, it is possible to account for the acid reaction of the urine, and for the deposition of crystals of uric acid, yet by it the existence of certain conditions, which probably never occur, is rendered necessary. It requires either that free uric acid be formed at the kidneys in such quantity as to be able to convert the tribasic phosphate of soda into an acid phosphate, and that at a temperature of from 99° to 160° F., or that the kidneys secrete urates and the acid phosphate of soda in such quantities, that the uric acid dissolved in the urine may account for the acidity of the fluid. Neither of these conditions have ever been shown to exist, nor is it probable that either of them naturally occur; it is therefore necessary to seek elsewhere for the cause of the acidity of the urine, and for the deposition of crystalline uric acid. In order to determine why any given specimen of urine does or does not deposit a sediment, it is necessary to examine its chemical constitution carefully, and at different periods. It should be examined immediately after being voided, and again as soon as turbidity commences. The greater the amount of urates, and other solid constituents which urine contains, and consequently the less the amount of water, the more readily does a lateritious deposit take place as the urine cools from 86° to 59° F. In cases in which the sp. gr. of the urine ranged from 1015 to 1032, the quantity of uric acid thrown down ranged from 0·533 to 1·760 grains. The period at which the lateritious deposit falls is dependent on the quantity of water, the amount of urates, and the temperature of the medium. In relation to the formation of these deposits, it should be determined whether urine, as its temperature falls from 60° to 50° F., does not suffer an interchange in its bases and acids, whereby the urates are set free. Again, if the development of an acid in urine contributes to the production of sediments of amorphous urates, it requires to be determined what are the circumstances which either accelerate or delay the formation of such acid. Inasmuch as the healthy urine of twenty-four hours neither contains so little water, nor deposits so large a quantity of uric acid on the addition of hydrochloric acid, as a specimen of fever urine, which spontaneously throws down a precipitate, it may be inferred that in such a case the quantitative difference of uric acid sufficiently explains the formation of a sediment. But in other cases, in which such an explanation cannot hold, the reason must be looked for elsewhere.

Thirdly, It is probable that, under all circumstances, uric acid, when separated from the kidneys, is combined with a base, at any rate with ammonia; and that

only in those cases in which very large quantities of other stronger acids are formed in the system, can it be deprived of this alkali. When no free acid is found in urine just voided, which subsequently lets fall a precipitate, containing uric acid in crystals, the phenomenon must be ascribed to the development of a new acid. A similar explanation must also be given when a sediment, consisting of urates, is converted into one consisting of crystalline uric acid. The acid which is developed is either acetic or oxalic; it is formed apparently by a kind of fermentation. A moderately high temperature accelerates its formation, while boiling heat or alcohol retard or entirely prevent it. Urine, which has deposited a sediment of urates, and is disposed to undergo an acid fermentation, will furnish crystals of uric acid sooner if kept at a temperature of 72° F. than when exposed to 42° F. Several circumstances show that oxalic acid may be developed in urine rich in uric acid; when no free base exists this acid will decompose the urates, and unite with their base, especially with that of urate of lime, forming oxalate of lime. It may be assumed as a general principle, that neither free acids, nor free alkalies, ever exist in blood or urine.

Fourthly, The turbidity of urine, on the addition of an acid, results from the decomposition of the urates, and the consequent escape and deposition in an amorphous condition of uric acid. Crystals of the salt subsequently appear. Its deposition always depends on decomposition, and not on its previous existence in the urine in a free state.—*Medical Gazette*, No. 162-3, from Casper's *Wochenschrift*, April 1848.

248.—*On Albuminuria from Cantharides Blisters.* By M. Bouillaud.—Martin Solon, and various other authors, have noticed the occurrence of a temporary albuminuria in the course of acute affections. M. Bouillaud has also, in the first volume of his *Clinique Médicale*, published some cases of this occurrence. Since this he has devoted his attention more particularly to the effect of blisters in producing albuminuria, and finds them to be frequently followed by this result, and nearly constantly so when applied immediately after cupping had been practised on the same part. M. Bouillaud has found this coincidence between the application of a blister and the appearance of albumen in the urine, in two out of three of the cases which he had published as albuminuria in entero-mesenteric typhus; and he believes the absorption of cantharides to be a very frequent, if not the invariable cause of albuminuria in acute diseases.

M. Morel-Lavallée, who has made observations similar to those of M. Bouillaud, in regard to the occurrence of albuminuria after blisters, considers this condition as indicative of a form of cystitis. Some of M. Bouillaud's cases, in which he had an opportunity of observing the *post-mortem* appearances, he found the pelvis and calyces of the kidneys congested and ecchymosed, and the cortical substance more vascular than natural, while the bladder was little, if at all, altered. The occasional absence of pain in the region of the bladder is admitted by both authors, although slight strangury and frequent desire to make water are present in the majority of cases. M. Bouillaud does not consider the membranous and other forms of deposit in the urine, described by Morel-Lavallée as being in reality albumen, but only altered forms of vesical mucus. He recognises albumen only in one form, viz. in solution in the urine; and he is inclined to consider it as coming invariably from the kidneys. He does not profess, however, to have studied the action of cantharides on the bladder, nor does he deny the conclusions arrived at by M. Morel-Lavallée with respect to the occasional formation of false membranes. This, however, he considers as of secondary importance to the lesion of the kidney, in consequence of which the abnormal secretion of albumen is poured out.

The pathological cause of the affection above described is probably, according to M. Bouillaud, the absorption of cantharadine, which, being excreted by the kidneys, exerts upon their mucous membrane a reaction similar to the well-known effect on the skin, and induces an abnormal secretion from the former as from the latter.—*Révue Medico-Chirurg.*, Jan. and Feb. 1848.

III.—PRACTICE OF MEDICINE.

249.—*On the Treatment of Œdema of the Cellular Tissue by Deep Incisions.* By M. Lombard of Liége.—Notwithstanding the general impression, that incisions in anasarcous limbs are peculiarly apt to be followed by gangrene, the author has

unhesitatingly followed, for six years, in the general hospital at Liége, a practice as bold as it is unusual. As soon as the anasarca threatens to be dangerous, he causes a number of incisions (four or five for each limb, less than half an inch in length, and principally in the depending parts) to be made, passing entirely through the subcutaneous cellular tissue, and down to the fascia. He then places the patient, if possible, in the sitting posture, with the feet supported upon cloths. In this way, a very rapid evacuation of the fluid is procured, and the over distended skin rapidly returns to its natural condition. After all the fluid has been evacuated, a bandage is applied, so as to prevent a second effusion of serum, and at the same time to procure adhesion of the incised wounds by the first intention; results which, according to the author, may be confidently expected, if a moderate compression be employed.

When this method is resorted to in time, before the vitality of the skin has been destroyed by distension, and when care is taken to procure union by the first intention, as above described, M. Lombard asserts most decidedly that it is not liable to be followed by gangrene: and he appeals to the ample experience of his hospital practice for six years past in proof this fact. He explains the frequent origin of gangrene in other hands, by the too long delay of the operations, the gangrene being in most cases the consequence, not so much of the punctures, as of the distended condition and injured vitality of the skin, which would probably have led to this casualty even had no punctures or incisions been practised. Besides, the small and superficial punctures which are resorted to by some practitioners when too late, are quite insufficient for the rapid evacuation of the fluid, and cannot, therefore, be healed by the first intention. Hence the deep incisions here recommended, instead of being more frequently than others the cause of gangrene, are in reality the only safe proceeding when anasarca is obstinately on the increase.

When ascites accompanies the anasarcous condition of the limbs, and is dependent on the same pathological condition, M. Lombard finds that the removal of the anasarca in this method is almost always followed by the rapid disappearance of the ascites. He has been enabled in this way to relieve distension of the abdomen, even when so great as to cause extreme dyspnœa.—*Gazette des Hôpitaux*, May 9, 1848.

[It does not admit of doubt, that many of the bad effects which have been ascribed to incisions when practised in cases of extreme œdema, have resulted from the state of the integuments prior to the incision, rather than to the operation itself. Hence, if incisions are to be resorted to, we think that the principles of M. Lombard's method, viz. early and rapid evacuation of serum, and union of the wounds by the first intention, ought to be kept in view. In a great number of cases however, acupuncture, when performed in time, may be made to fulfil every purpose of incisions, and may be repeated frequently without any disagreeable consequences. The rapidity with which serum may be drained away through these small apertures, is often very remarkable; and M. Lombard appears to us to have undervalued the efficiency of this method. It should certainly be resorted to in the first instance.]

250.—*Inflammation of the Superior Lobe of the Right Lung.* By M. HERVEZ.—In several cases (the number is not mentioned) which the author observed of inflammation limited to this portion of the lung, he was struck as well by their fatal issue as by the peculiar symptoms which characterise the disease, and distinguish it remarkably from inflammation of the lower lobes of the lungs, or of the upper lobe of the left lung. The patient early complains of great weakness, and is troubled with nausea; the surface is pale and cold; the pulse is small and weak, and a low delirium is usually present. There are little cough and expectoration, and the physical signs are obscure. Lastly, a symptom peculiar to the disease is acute lancinating pains in the region of the clavicle, and extending to the shoulder. From a consideration of the post-mortem appearances observed in *one* case, the author endeavours to account for the peculiar characters of this affection.

On raising the upper and hepatized lobe of the right lung, it was seen to have rested on the superior vena cava, the circulation through which, the author thinks, must have been obstructed. The entire length of the vein was occupied by a fibrinous clot. The inflamed lung also rested on, and appeared to compress, the right auricle.

The interference with the heart's action, supposed to be thus occasioned, is applied to account for the feeble pulse, coldness of the surface, and symptoms of general debility, which accompany the disease. The low delirium is ascribed to the venous congestion of the head; and the acute neuralgic pains in the supra-

and infra-clavicular regions, are supposed to arise from the pressure of the inflamed and heavy lung on the pneumogastric nerve.

The practical deduction from these observations is, that we should not be deceived into inactive treatment by the symptoms of apparent weakness, but, on the contrary, adopt with energy those antiphlogistic measures calculated to relieve the pneumonic inflammation which constitutes their physical cause. In illustration of the value of this precept, M. Hervez narrates a case where the weak pulse and other symptoms of debility appeared strongly to contra-indicate active treatment, but in which, notwithstanding, its application was followed by recovery. —*L'Union Médicale*, May 25, 1848.

[The greater mortality of inflammation attacking the upper lobes of the lungs is generally admitted, and we are disposed to ascribe it to the more frequent occurrence of the disease in this seat in exhausted subjects. That any difference should exist between the two lungs in this respect, has not, we believe, been before suspected. We shall look with interest for new and more accurate observations.]

251.—*Case of Chronic Ascites successfully treated by Tincture of Iodine injected into the Peritoneum.* By M. Rul Ogez. —A boy, aged seven years, became gradually affected with ascites after an acute affection of the abdomen, the exact nature of which is not known. Various remedies had been tried without effect, and, at last, tapping was performed with temporary relief; but the fluid soon accumulated again to such a degree as to cause dangerous orthopnœa, and he was placed under the author's care three years after the beginning of the affection. At this time the distension of the abdomen was excessive; he was unable to sleep except at rare intervals; and had, moreover, become affected with dysentery, which was accompanied by great abdominal pain. After a few days of appropriate treatment, the dysentery was considerably alleviated; but the breathing continued so difficult, that tapping was performed without delay. After an examination of the abdomen, which resulted in the conviction that the viscera were in the normal state, and that the ascites probably depended on disease of the peritoneal membrane, M. Ogez injected through the canula a mixture of 3 gros (216 grs.) of tincture of iodine, with about 3 oz. of water; and by means of gentle friction, endeavoured to disperse the fluid through the whole abdomen. None of the injected fluid returned by the canula, which was accordingly withdrawn. The abdomen was then bound up as usual.

There was little or no pain during the operation, but the same evening and next day there was lancinating pain and tenderness of the belly, with tympanitic distension, fever, small frequent pulse, and some bilious vomiting. These symptoms not appearing to indicate a more intense degree of peritonitis than was necessary for the cure, M. Ogez prescribed only rest, with regulated diet, and diluent drinks. At the end of five or six days, the inflammatory symptoms had completely subsided; but a small quantity of fluid, giving rise to an obscure sense of fluctuation, had reappeared in the abdominal cavity; which, nevertheless, had lost five-sixths of its former volume. From this time, the patient continued to improve under a tonic regimen, and frequent friction of the abdomen, with moderate compression by means of a laced bandage. A moderate use of laxatives and diuretics, and exercise in the country so soon as the state of the patient permitted, completed the cure. Four months after the operation he continued to be gaining health and strength, and the abdomen was no larger than is usual in children of his age.

The author observes, that the success of this operation is no doubt owing to the fact, that the ascites was of the kind which he calls "essential;" that is, depending on disease of the peritoneum alone. It is only in such cases that he recommends its performance.—*Revue Medico-Chirurgicale*, March 1848, from the *Bulletin de l'Académie de Médecine de Belgique.*

252.—*Dentition in Infancy—Weaning.* Clinical Lecture by Trousseau.— The teeth of the child are twenty in number; eight incisors, four canine, and eight molar. The process of dentition may be divided into five distinct eruptions, viz.:—

1st, Inferior median incisors,		2 teeth.
2d, Superior incisors, the median first,	- -	4 ...
3d, First molar and inferior lateral incisors,	-	6 ...
4th, Canine,	- - -	4 ...
5th, Last Molar,	- -	4 ...
		20

The first two teeth generally appear without accident, the next generally produce some pain. Nevertheless a year may pass over without serious disorder.

At the period of the third eruption, there is generally pretty severe constitutional disturbance; but the fourth, that of the canines, is the most perilous of all. When the fifth group appear there is scarcely ever any thing of consequence. Now, it is of great importance, when the child is to be weaned early, to take advantage of the periods of repose which occur between the second and third, or the third and fourth periods. If it must be weaned, therefore, before the eruption of the canines, wean immediately after the third eruption; and, if it must be weaned before the eruption of the first molar, wean immediately after the appearance of the upper incisors. Do not wait till the molars or the canines are on the point of appearing, for in this case the weaning will be attended with great danger.

When the child has sixteen teeth it ought to be weaned. It may be weaned when it has twelve; but never when it has nine, ten, or eleven, for that is the middle of an eruption.

If the pain of dentition is very acute, cause a mixture of extract of belladonna and anodyne liniment to be rubbed in behind the ears and angles of the jaw, and apply poultices surrounded by wadding; if the gum is much swelled, and the tooth is on the point of appearing, and thus causing the intensity of the pain, press strongly on the gum, the tooth cuts it, and the pain is immediately relieved.—*Gazette des Hôpitaux*, No. 69.

253.—*Epidemic appearance of Cerebro-spinal Arachnitis.* Clinical Lecture by Dr JAS. F. DUNCAN.—Of late years considerable interest in the profession has been excited by the fact, that cerebro-spinal arachnitis has been noticed on several occasions to arise idiopathically, and to assume an epidemic form. Jahn tells us in his Practical Essays, that at Meiningen, in the year 1834, he met with twenty-one cases in the course of seven or eight weeks. Rilliet, in the *Archives Générales*, declares that (at Geneva) he has seen it not only in infants, but in adults. And on repeated occasions since the year 1837 it has been found to attack epidemically the fortified towns in France, Versailles, Metz, Strasburg, Bayonne, &c.; so that the Royal Academy, from the importance it had assumed, made it the subject of special investigation by commissioners appointed for the purpose. Last year (1846) it made its appearance among ourselves, and under circumstances of a very remarkable character. It first was observed at Loughlinstown by Dr Darby, who published an account of its symptoms and progress in the *Medical Press;* next it appeared at the South Dublin Union under the charge of Drs Shannon and Mayne, the latter of whom has given an admirable description of the disease in the *Dublin Quarterly Journal;* and lastly at Belfast, all about the same period, and in each locality marked by the same peculiarities. Thus, in each instance it was the inmates of the workhouse who principally suffered. It was confined almost exclusively to boys, wherever it was met with. It began suddenly, ran its course rapidly, was remarkably fatal, and presented on *post-mortem* examination a much greater amount of inflammatory disorganization in the spinal marrow and its membranes than in the head.—*Dublin Med. Press*, No. 493.

254.—*Carcinomatous Affections of the Spine.*—Dr Bühler has lately described three cases of this incurable but interesting and very important disease, of which there are few records, and of those which have been recorded all are doubtful, except the four cases by Mr Cæsar Hawkins, in the *Medico-Chirurgical Transactions* of 1841. Dr Bühler's cases are remarkable, seeing that the affection presented itself apparently as a primary disease of the vertebræ, as in one of Mr Hawkins', in whose three other cases carcinoma had already been developed in the mammæ or testes. Dr Bühler's first case occurred in an actor, a remarkably fine and well-built young man of twenty-seven years of age. The second was that of a man of sixty-nine, who from his youth had been scoliotic, or humpbacked, in consequence of a fall. The third was a woman of forty-two, who asserted she had had no previous illness. The first case was admitted to the hospital for paraplegia of the legs; the two other cases were sent in from the country as chronic rheumatism, for which they were at first, and unsuccessfully, treated. All three exhibited in the progress of the disease the greatest similarity of symptoms, the most prominent of which were excessive pains, which yielded to no remedy. These were at first confined to the back, but soon they extended to other parts of the body, and never ceased. At times they were most severe, particularly during the night, depriving the patient of all sleep. Pressure upon the spinous processes and neighbouring soft parts, and any motion of the body, materially increased the sufferings; the most easy posture was half recum-

bent, in which the patients generally remained. There were frequent spasmodic twitches, sometimes in one group of muscles, sometimes in another; clonic spasm of the legs and starting of the whole body, accompanied with severe pain, but without any disturbance of the sensorium. The respiration was generally quickened, and sometimes genuine asthmatic dyspnœa, with great constriction of the chest, took place. Other groups of muscles were at times attacked with tonic spasms; thus, the thighs were drawn up upon the abdomen, the muscles of which were frequently violently contracted. Constipation and retention of urine existed; at last, however, the sphincters became paralysed, and then both fæces and urine passed involuntarily. According to the higher or lower seat of the disease, the upper or lower extremities were paralysed, and sensibility partly or wholly extinguished. Occasionally formication and numbness were complained of: and motion, either voluntary or otherwise, always occasioned great pain. No scoliotic change in the form of the spine was observed, except in the young man, in whom the curvature became greater than natural; nor was the usual carcinomatous expression of countenance present, until near the end, when general cachexia was developed, and other organs participated in the disease. The progress was slow, death ensuing from the sixth to the ninth month. On dissection, the vertebræ were found softened, infiltrated by carcinoma, or wholly destroyed, and the whole spine more or less affected. The bones of the pelvis, femur, and sternum were also involved, and evidences of disease were found in the brain, lungs, pleuræ, liver, kidneys, and several lymphatic glands. ("Ueber Wirbeltuberkulose in einer bisher noch nicht beachteten form, und über den Krebs der Wirbelsäule von Dr Heinrich Bühler." 1847.)—*Medical Times.*

255.—*On the Treatment of Typhus Fever.* By M. Rostan (Hôtel Dieu). M. Rostan is a believer in the existence of a special morbific cause for typhus fever, affecting primarily the blood, and independent of any local lesion. Where such lesions exist, the fever is seldom found to correspond in intensity with the gravity of the local affection; nor are the pathological appearances of that invariable character which the doctrine of the symptomatic and inflammatory character of the fever would lead us to expect. Typhus fever occurs in three principal forms, in which the cerebral, thoracic, and abdominal complications respectively predominate. The latter is, in M. Rostan's opinion, identical with the *fièvre typhoïde* of Paris, and is characterised pathologically by the tumefaction and ulceration of the intestinal glands. The typhoid, like the typhus, attacks the same person only once, is accompanied by a state of the blood opposite to that in inflammations, and is never cut short by antiphlogistic treatment; being in this respect exactly like the whole class of exanthemata.

These remarks bear directly on the treatment, which must be directed not so as to suspend an inflammation, but so as to neutralize the effects of a morbid poison. According to the nature of these effects in the individual cases, and according to the accidental concomitants, the remedial means should vary. The gastro-intestinal form will require the moderate use of purgatives; the cerebral form, local bloodletting; the thoracic form, bronchitis, or typhoid pneumonia, may require even general blood-letting; while the presence of great prostration may contra-indicate each or all of these measures.

The treatment of typhus at the present day ought therefore to be addressed exclusively to the symptoms. If, at some future period, it should appear (as is not at all impossible) that we have a specific remedy for the typhus poison, such as we already have for the intermittent, we shall then have a basis for a treatment applicable to all cases. Such a remedy, however, has not yet been discovered; and it is therefore obvious, that nothing can be more absurd and pernicious than a routine treatment. Indeed, it may fairly be asserted, that if an unvarying treatment, say the antiphlogistic, be found to save two-thirds of the cases, there will be found in the remaining third some who have fallen victims, not to the disease, but to the treatment; as, for example, highly adynamic cases, which would have been saved by a tonic regimen, but had no chance of recovery according to the method pursued.

Some authors have denied the efficacy of remedies in typhus fever; alleging, on the ground of hospital statistics, that the proportion of deaths is always the same, whatever be the treatment employed. But such reasonings apply only to the results of routine practice in large series of cases; and are therefore, in M. Rostan's opinion, entirely inapplicable to the general question of the treatment of this disease. The administration of remedies can, in truth, only be safely neglected when the symptoms are so slight as not to demand inter-

ference.—*Gazette des Hôpitaux*, No. 61, 1848.

256.—*Cynanche Pharyngea from Disease of the Mucous Follicles.* Clinical Lecture by M. CHOMEL.—This disease, of which Chomel has observed twenty-two cases, although it is by no means of rare occurrence, has hitherto been overlooked. It consists of hypertrophy of the mucous follicles of the pharynx, soft palate, and uvula. It has been seen much more frequently in males than in females, chiefly at the age of from five to seventeen years. It often occurs along with a peculiar form of the upper jaw, in which the palatine arch is elevated, the cavity of the nose rendered smaller than natural, and nasal respiration to a great extent prevented. The upper lip in such persons is short, and the mouth is habitually kept open. Hence they are peculiarly liable to this disease from the perpetual tendency to dryness of the pharynx. Certain professions, as that of public singers, act as occasional causes of this disease. The first symptom complained of is a sense of uneasiness in the back part of the throat, with constant effort to get rid of the mucus which collects in that quarter. The patient has also a constant craving for water, which produces temporary relief. There is guttural cough and expectoration of small pellets of tough mucus, sometimes streaked with black. The voice of singers is contracted in range and impaired in quality, and patients in general have great difficulty in speaking aloud for any length of time. These circumstances are apt to induce a suspicion of phthisis. On examination of the throat, the arch of the palate is seen to be covered by small red points, which are more thickly disseminated on and near the uvula. These become more numerous and larger as the disease advances, till at length they run into each other, forming ridges and raised patches, between which only a small part of the mucous membrane retains its natural appearance. The affection is essentially chronic in its progress; it does not endanger life, and sometimes disappears without treatment. It should be observed, that a hypertrophy of the mucous membrane and follicles often exists in public speakers and singers, quite independently of disease, which produces no symptoms and demands no treatment. Gargles with borax or alum are generally sufficient to cure this malady in the earlier stages; should these fail, or should the morbid changes be considerable before treatment is commenced, cautious cauterization by the solution of nitrate of silver, or of nitrate of mercury, or by nitric acid diluted with three parts of water, and applied by means of a small piece of sponge, must be had recourse to. Baths, the douche, and the use of mineral waters containing sulphur, are also useful. Loud or continued speaking or singing must be avoided. The food must be well masticated, and must consist of articles perfectly free from acridity or acidity.—*Gazette des Hôpitaux*, June 1, 1848.

V.—PRACTICE OF SURGERY.

257.—*Amputation through the Ankle Joint.*—This operation, which has been so frequently performed of late years by the recommendation of Mr Syme, is now, we believe, universally admitted into the list of regular and established operations.

It was long ago proposed by Velpeau and Lisfranc, and various ways were devised so as to leave a covering for the ends of the tibia and fibula by means of lateral anterior and posterior flaps, and several operations of this kind were performed; and, although the results of one or two were encouraging, the general ill success attending this operation led to its abandonment. It was agan attempted by M. Baudens in 1839, and in the operation proposed by this surgeon the covering for the ends of the bones was made to consist of a long flap of skin taken from the dorsum of the foot. The thinness of the integuments, however, from which the flaps were formed in all these operations, gave little promise of a well-formed stump on which the patient might rest the weight of his body, and accordingly the results of this tibio-tarsal amputation remained highly unsatisfactory.

In 1842 it occurred to Mr Syme, that the thick fleshy integuments on the sole of the heel would form an admirable covering for the ends of the bones, and that from them alone could a *pad* of sufficient thickness and firmness be got whereon to rest the weight of the body. Mr Syme's operation has been repeatedly described, and is well known. The success attending the first few cases was so perfectly satisfactory that it rapidly acquired celebrity, and long ere this it has

been performed in England, France, and Germany.

Death has scarcely ever followed the operation; and the general result has been a firm round stump, on which the patient could rest the weight of his body with as great ease as on the sound heel; and, with an artificial foot, he has been able to walk stoutly and without difficulty.

Two objections, however, remain to the operation; the difficulty in its performance, and the occasional occurrence of destruction of the flap by mortification. To obviate these various suggestions have been made, and flaps have been made from all the different parts in the neighbourhood of the articulation; but none are found to present the firm rounded cushion beneath, which is formed by Mr Syme's flap taken from the sole of the heel.

We subjoin the following account of a plan which, we observe, has been lately proposed and executed by M. Sédillot of Strasburg. The case was one of malignant disease of the foot.

"The first incision was made in a semicircular direction, about three finger-breadths in front of the malleoli; a second was continued from the outer angle of this, beneath the external malleolus beyond the tendo-Achillis, which was divided. The joint was now entered from the outer side and behind, and, when the disarticulation was accomplished, a flap was formed from the skin on the inner and under side of the heel, by cutting from within outwards. The malleoli were next removed with the saw."—*Gazette Méd. de Strasbourg*, Mars 20, 1848.

This somewhat resembles a plan which has been adopted in one or two cases in Edinburgh (a notice of which has not yet appeared), where the greater part of the thick integuments of the heel are preserved in a long and broad flap, taken from the inner side of the foot. Were it not for the objections, already stated, against Mr Syme's operation, nothing would remain to be desired on the subject. The difficulty of dissecting back the flap, however, is considerable, and requires to be repeatedly practised before it can be performed with any degree of facility.

The sloughing of the flap, too, has now repeatedly occurred, and has been proved not to depend solely on the division of the posterior tibial artery before its division, as gangrene has supervened in cases where the plantar vessels have bled freely at the extremity of the flap. The force required in pushing the divided integuments round the promontory of the heel, submits the base of the flap to such stretching, that we cannot help suspecting that the injury done to the vessels by the violence which is necessarily used, may be the cause of mortification occasionally taking place; and this opinion has been strengthened by observing that gangrene has generally occurred in elderly persons, where the vessels do not submit to much injury with impunity. As yet, however, Mr Syme's operation is decidedly superior to any other which has been described; and except in the case of patients advanced in years, or in those in whom there is a suspicion of arterial disease, it may be undertaken with the confident prospect of a most satisfactory result.

258.—*Operation of Enterotomy.* B. M. A. Didot.—The following is another successful example of the employment of M. Amussat's operation, the establishment of an artificial anus in the lumbar region for the relief of obstructed bowel.

A man of sixty-five years of age had suffered from great irregularity of the bowels for about four years, extreme constipation, varying with severe attacks of diarrhœa. For above a year these symptoms had been accompanied with a dull pain in the hypogastric region, which had latterly become more severe, and of a lancinating character, and no evacuations could be obtained but by the use of strong purgatives and enemata, and even by these means the quantity of feculent matter evacuated was very small. His sufferings at last became extreme; the abdomen was enormously distended; and, worn out by constitutional irritation and suffering, he was most anxious for relief by any means.

On introducing the finger as far as possible into the rectum, the obstruction was found to be caused by a hard tumour, of the size of a large billiard ball, situated about the lower extremity of the sigmoid flexure of the colon. As the perforation of the intestine above this point was the only chance of giving vent to the accumulated fæces, by which the colon was enormously distended, this operation was immediately recommended to the patient, and was performed in the following manner:—

The patient being placed on his belly, an incision, three inches in length, was made transversely in the left lumbar region, half-way between the crest of the ileum and the false ribs. After dividing the muscular layers and the fascia transversalis to an equal extent with the first incision, the back part of the colon, where

it is not covered by peritoneum, was exposed.

Two needles were then made to transfix the intestine, each armed with a ligature, by means of which the intestine was gently drawn forwards towards the mouth of the wound, and a crucial incision, about an inch in length each way, made through the coats the in space between the ligatures. An enormous evacuation of fæces followed the first perforation of the intestine ("*un veritable déluge stercoral se fit jour par laplaie*"), and the cut edges of the bowel were drawn out by the ligatures through the wound, during the evacuation of the pent-up contents of the colon. The edges of the intestine were then attached to the skin by five points of suture. A poultice was applied over the opening, and complete and immediate relief was obtained by the patient from his protracted sufferings.

The fæces continued to be evauuated freely by the artificial opening, and eighteen days after the operation a small quantity was evacuated by the natural exit. Some days afterwards blood and purulent matter were evacuated by the anus, and on examination, with the finger in the rectum, the tumour was found to be ulcerated in several points. Two months after the operation the patient is stated to have improved so much in health as to be able to move about with comfort, and to have gained flesh.

No further mention, however, is made of the state of the artificial anus or of the progress of the disease. The case, however, is important, as showing the relief and prolongation of life which may be obtained from the performance of this operation. M. Amussat is said to have adopted this proceeding in eleven cases, in all of which similar good results to these here mentioned have been obtained. —*Bulletin de l'Acad. Roy. de Bélgique*, Tom. vi. No. 1.

259.—*Nitrate of Silver Ointment in Erysipelas.*—M. JOBERT states that he has obtained better results from the application of nitrate of silver with axunge, than from any other application in the treatment of erysipelas. Numerous cases are mentioned of the severer form of erysipelas having been treated in this manner in the Hôpital St Louis, where the disease is very prevalent, and with invariable success. Four degrees of strength are employed, varying from two drachms of nitrate of silver to an ounce of axunge, to equal parts of the ointment and caustic. The ointment is applied twice a-day, and after each application a thin layer of the ointment is left on the affected surface, taking care that the entire inflamed surface and a short way beyond it are covered with it.—*Gazette des Hôpitaux*, May 11, 1848.

260.—*Rectal Operation of Lithotomy.* By M. MAISONNEUVE.—The operation proposed by M. M., and which he has lately performed successfully, differs from the recto-vesical method practised by Sanson and some others, in the sphincter ani and lower extremity of the rectum not being divided. The forefinger of the left hand is introduced into the anus, and a knife, sharp only near the point, is guided along it to the groove in the staff, and at once made to perforate the coats of the rectum and the membranous portion of the urethra. A *lithotome* is then substituted for the first knife, and its point made to rest in the groove. The operator then takes the handle of the staff in his left hand, and, depressing it, the *lithotome* held in the right hand is made to enter the bladder, dividing the prostate. The staff is then given to an assistant, and the forefinger of the left hand is introduced, to dilate the incision in the neck of the bladder. The staff is now withdrawn, the forceps introduced, and the stone extracted through the anus. This operation has been performed in one case by M. Maisonneuve with the best results. The greater part of the urine was passed by the urethra on the second and third days. On the fourth day the patient was out of doors smoking his pipe, and, on the ninth day after the operation, he walked several miles, and presented himself for inspection at the Académie de Médécine. He returned home seventeen days after the operation quite well, and passing his urine entirely by the urethra.—*L'Union Médicale*, May 25, 1848.

261.—*Observations on the Pathology and Treatment of Gonorrhœal Discharges in the Female.* By Dr EGAN.—After briefly reviewing the labours of those whose investigations into the nature of this disease were carried on in continental hospitals, the author proceeds to furnish a statistical summary of the particulars of 112 cases which came under his immediate care in the Lock-hospital of Dublin. The facts recorded have been ascertained chiefly from careful examination with the speculum, a means of diagnosis, the employment of which on an extensive scale, insufficient opportunity, and the voice of prejudice in this country, had previously

restrained. This disease is not confined to the vagina, as is generally supposed, but extends itself to the uterus, always involving the neck of that organ, and very frequently penetrating the uterus itself, and thus by a vitiated secretion of muco-purulent matter from the cervix uteri, or from the internal lining membrane of the uterus, the disease may be kept up for an indefinite period, while the vagina itself may be perfectly healthy. In fourteen of the cases detailed no disease of the vulva or nymphæ was apparent, the disease being dependent on the state of the uterus.

In ninety-eight of the 112 cases the vagina presented a more or less inflamed appearance. In thirty-eight cases granular erosions were apparent on the cervix uteri, with attendant induration in six. In fifty-seven the os and cervix exhibited an erythematous condition, generally accompanied with engorgement and slight induration. In six there was hypertrophy of the anterior lip of the os uteri. In six there was enlargement of the posterior lip, while in thirteen both lips were equally affected. In ninety-seven cases the uterus participated in the disease, which was evinced by a muco-purulent discharge from the os uteri.

The duration of disease previous to examination, was as follows; In twenty-six it varied from one to eleven weeks; in sixty-one from one to eighteen months; and in twenty-one from one to eight years. The greatest number occurring at two weeks, one and two months, and one year.

The symptoms presented on the invasion of the disease were generally of an inflammatory nature, as swelling of one or both labia, difficulty and pain in micturition, with a sensation of heat and weight in the lower part of the pelvis; these generally subsided in a few days by rest in the recumbent position, with spare diet, the copious use of demulcent drinks, and the occasional aid of fomentations. General blood-letting was seldom resorted to, and local never, owing to the disposition which leech bites under these circumstances manifest to degenerate into foul and unmanageable sores. Nauseating doses of tartar emetic in this stage of the disease were useful. Balsams and cubebs, which are found so efficacious in the treatment of this affection in the male, prove almost inert in the female. For this reason, in the latter, local applications are especially called for; of these, solutions of chloride of lime, and injections of alum, are useful in cleansing the parts, besides exercising an astringent action on the vagina, which is usually in a relaxed condition. In more advanced stages of the disease, strong solutions of nitrate of silver will act beneficially. The most successful plan of treatment is that proposed by M. Ricord—the application of the solid nitrate of silver to the sides of the vagina and neck of uterus; the immediate effect is to increase the discharge, but soon to diminish or totally arrest it. When this fails, the acid nitrate of mercury may be employed. The separation of the walls of the vagina by plugs of lint will assist the cure; and, in protracted cases, counter-irritation to the sacrum and the actual cautery may be had recourse to. As substitutes for injections into the vagina (a method of treatment which, in consequence of the frequent participation of the uterus in gonorrhœa, the author was deterred from resorting to), a finely pointed pencil of nitrate of silver was introduced through the os, and allowed to remain in contact with the lining membrane of the uterus for some time. Preparations of steel, especially the compound iron mixture (D.P.), conjointly with the local application, are very efficacious in restoring the uterus to its healthy condition.—*Dublin Quarterly Journal of Medical Science*, May 1848.

262.—*Ulcers of the Cornea; New Method of Treatment.*—Of a considerable number of cases of ulcerative corneitis which fell under the notice of M. Dufresse-Chassaigne in 1846 and 1847, several were found not only incurable by the means ordinarily recommended, but even to be much aggravated by their employment; and such serious consequences sometimes resulted in this way, as to compel the entire discontinuance of all active local treatment. In particular, M. Dufresse-Chassaigne remarked, that in two cases the cauterization by nitrate of silver was followed by severe attacks of supra-orbital neuralgia, which only yielded to the persevering use of tonics. In most of these instances of intractable ulceration, a number of radiating vessels, disposed in the form of a cone, were visible to the naked eye at the inner canthus, extending under the conjunctiva or in its substance, from the caruncula to the ulcer, which was generally situated within and in the lower part of the pupil. The apex of this cone of vessels was directed towards the cornea. M. Dufresse-Chassaigne was at length led to conceive the idea of attempting a cure, by cutting off the communication between these engorged vessels and the ulcer; and this he effected in two cases which he has recorded, by

excising a portion of the vascular cone, along with the part of the conjunctiva in which it was imbedded. A mere transverse incision of the vessels was found ineffectual, from the rapidity with which a communication between their severed extremities was reestablished. The bleeding which followed this operation was copious, but was readily checked by cold water dressing, and compresses; the advantages resulting from it were in both cases complete and satisfactory. The operation should not be performed under a very strong light, from its effect in producing efforts towards the closure of the eyelids. The patient must be directed to turn the eyeball as much as possible outwards, and the vascular cone being seized by means of the vulsellum, at a point from one to two lines distant from the edge of the cornea, a portion of the vessels is to be excised by fine sharp scissors, so as effectually to interrupt continuity. The after treatment consists simply in the application of compresses soaked in cold water, and renewed eight or ten times a-day.—*Union Médicale*, for June 8, 1848.

263.—*New Method of Treatment in Fissure of the Anus.* By M. MAISONNEUVE.—The author, believing this affection to depend on spasm of the sphincter ani, has adopted the following operation (first proposed by M. Recamier), in order to destroy the spasm by forcible distension. Introducing two fingers into the rectum, the anus is stretched by drawing the fingers in opposite directions, and the operator is thus enabled to introduce his whole hand into the rectum; he then closes his hand, and draws his fist through the anus. Among a great number of cases the author has not witnessed any bad effects, or a single relapse.—*Gazette des Hôpitaux*, October 2, 1847.

[For the complete destruction of the tendency to spasm, the hand must be retained in the rectum for a considerable time; in such cases permanent relaxation of the sphincter is a bad effect to be apprehended from the operation.]

264.—*Injection of Iodine for the Cure of Fistula in Ano.* By Dr VAN CAMP.—Equal parts of tincture of iodine and water were thrown into the fistulous cavity twice a-day for five days. The first injections caused great pain, and when the inflammation excited by them was deemed sufficient, they were suspended for three days; after that they were recommenced, and on the sixteenth day the cure was complete.—*Journ. de Méd. Prat.*

V.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

265.—*On Polypus of the Uterus.* By Dr LOCOCK.—In a paper read before the Royal Medical and Chirurgical Society, Dr Locock points out the danger of flooding attendant upon small polypi, and the difficulty of removing them when attached high up within the cervix uteri. He has met with five cases of this description, all having this peculiarity, that the small polypus could not be detected except during the attacks of hemorrhage, at which times the os uteri was found open and flaccid. He succeeded in three of the cases in removing the polypi, with extreme difficulty and after many failures. One of the operations he describes as "picking off or digging through the polypus with his finger nail," and, "he often felt, that if he had a finger nail long enough, strong enough, and sharp enough, he might scoop away the polypus." He therefore had invented a nail-like scoop enclosed in a canula, from which it could be protruded to any length. "The instrument is passed through the os uteri, its cutting edge is pressed against the base of the polypus, and it is then worked gently half round and back again once or twice, till it has cut through the object." In answer to a question from Dr Babington, inquiring how he prevented the uterus being wounded, Dr Locock stated, that he did not apprehend any ill consequences from wounding the uterus; for there was no organ of the body in its healthy state which could be wounded with more impunity than the womb.—*Lancet*, May 6, 1848.

[We cannot avoid calling attention to the comparatively inefficient nature of the practice recommended by Dr Locock. And we shall merely notice, in addition, the plan pursued in Edinburgh in similar cases, by quoting from the report of a communication by Dr Simpson to the Medico-Chirurgical Society of Edinburgh (*Monthly Journal*, 1844, p. 734), on mechanical dilatation of the cavity of the os and cervix of the uterus, as a means of diagnosis and treatment in some affections of that organ. "Professor Simpson first showed the difficulty which exists in ascertaining some of the morbid

conditions of the lining membrane of the cervix and cavity, in consequence of the small size of the normal opening into the organ. He pointed out that this opening may, by the use of a succession of *sponge tents*, be enlarged to such a degree as to overcome, in a great measure, this difficulty. The kind of sponge tent which Dr S. has used, is made in the manner of that described in most old works of general surgery. The pieces are pyramidal, of various sizes, and have a perforation in their base, to allow of their being temporarily fixed upon a curved wire or bougie, for their ready introduction into the os uteri. The bougie is withdrawn as soon as the sponge is lodged, and, in a few hours, the latter expands immensely in size. Previous to its introduction, a string is attached to the tent, to allow of its easy withdrawal. Under the expanding power of the tent, the cavity of the os and cervix uteri may be dilated, and without any suffering to the patient, to such an extent as to allow the finger to pass a sufficient distance for the purpose of ascertaining various points of diagnosis which could not otherwise be arrived at. Dr Simpson stated, that he had employed the same means to facilitate some kinds of remedial and operative interference in this part of the body, such as the removal of those small vesicular polypi that are so frequently clustered upon the interior of the cervix."]

266.—*Lymphatic Tumour of the Female Breast.* By Dr Coley.—This form of tumour is painful and tender to the touch, and feels as if composed of a series of hard cords lying parallel, or more or less frequently anastomosing, with one another. Its size varies from that of an almond to that of a pullet's egg. In addition, the neighbouring glands of the axilla are often swollen and inflamed. Under tonic and other treatment the tumour generally disappears entirely, but sometimes a permanent thickening and feeling of hardness remains in the part. The disease may return several times in the same patient, especially if her general health continue in a bad state. "This condition (says Dr Coley) is that of comparative emaciation, accompanied with irregular or deficient menstruation, depression of spirits, and general debility. Hence suckling and chlorotic women are most frequently the subjects of the attack."

One of these tumours was found, on dissection, to consist of the thickened coats of the lymphatics imbedded in a stratum of condensed cellular membrane. —*Lancet*, May 27, 1848.

267.—*Abscess of the Vulva.* By M. Velpeau.—Three cases of abscess of the vulva presented themselves at the same time, at the clinique of M. Velpeau, in young females of nineteen, twenty, and twenty-three years of age respectively. These abscesses are generally caused by excess of coition. If they are left to nature, they increase to a large size; their walls become very thin, and either an opening too small to permit the free escape of the matter is formed, or else a gangrene takes place of the thinned wall, which leaves too large an opening, and which does not heal up for some months. Hence the necessity of opening the abscess opportunely. M. Velpeau thinks the incision should be made on the outside of the labium.

In general, the cure is completed in five or six days. But, if the patient begins walking too soon, or otherwise irritates the recently diseased parts, the abscess is very apt to be again produced.

M. Velpeau says, that, within the last thirty years, he has seen at least a hundred and fifty cases of this description. Contrary to the opinions of Vidal and Huguier, he thinks that neither the vulvo-vaginal gland nor the follicles are the seat or cause of the suppuration, and consequently does not think that the extirpation of these parts would have any tendency to prevent a return of the abscess.—*Journal de Méd. et de Chir.*, Tom. XIX., Mai 1848.

268.—*Retroversion of the Unimpregnated Uterus.* By Professor Simpson. —In the paper before us, Dr Simpson himself has at last published, at some length, his views in regard to one of the most important affections of the unimpregnated uterus. His opinions in regard to the frequency of the disease, and his plans of diagnosis and treatment, have long been extensively known in the profession, and have received ample confirmation by the recent and valued researches of Dr Rigby, (*Medical Times*, 1846, p. 292, &c.) Dr Protheroe Smith, (*British Record of Obstetric Medicine*, 1848, p. 35, &c.) Dr Hensley, (*Provincial Medical and Surgical Journal*, January 1848,) &c. &c.

These important and original investigations were among the first fruits of the discovery of the uterine bougie. They were originally laid before the Medico-Chirurgical Society of Edinburgh, in 1843—(See our *Journal* for 1843, p. 660,) in a paper read by Dr Simpson on the uses and advantages of the uterine bougie. In the present imperfect notice, we shall

merely discuss the following three points, viz :—First, The frequency; second, The diagnosis; third, The treatment of retroversion of the unimpregnated uterus; and it is merely necessary to premise that, under the term Retroversion, Dr Simpson includes displacement backwards of the entire organ, not necessarily changed in form, (*retroversion* properly so called); as well as that state frequently designated *retroflexion*, implying the displacement backwards of the fundus only, or along with it, of more or less of the body of the uterus, the lower part of the cervix retaining in some degree its natural situation.[1]

1. *Frequency of Retroversion.*—A very extensive experience in the diseases of females has sufficed to convince Dr Simpson, that the opinions regarding the supposed rarity of this affection, maintained by Ashwell, Burns, Churchill, and other English writers on female diseases, are entirely wrong. It is now shown to be one of the most common and frequent displacements of the womb; and nothing more is required to convince any candid inquirer of the truth of this statement, than to investigate the subject with the aid of the uterine bougie, the only certain means of diagnosis in such cases.

2. *Diagnosis of Retroversion.*—In determining the presence or absence of this affection, very little confidence can be placed in the *functional symptoms or derangements*. Sometimes, especially when the pelvis is large and the displacement chronic, these sympathetic signs are entirely absent, while, in other cases, they are extremely severe and distressing. Further, however distinctly they may be marked, they can only indicate the presence of uterine disease, without at all indicating of what nature the disease is. Hence, it is necessary in this as in other uterine affections, to resort to the *physical examination* of the uterus, in order to determine its actual morbid state.

On examining per vaginam, we feel a projection of a solid tumour between the cervix uteri and rectum, when the finger is applied to the superior and posterior part of the vagina.—(*a*, *b*, Plate I.) On examination per anum, the same tumour is felt through the anterior wall of the bowel. The tumour is generally moveable under the finger, and is often tender to the touch. In regard to such a tumour, if discovered, it has still to be determined whether it is really the retroverted womb, or dependent on any of those states or diseases liable to be confounded with it, as, for instance, commencing pregnancy, fibrous tumours, ovarian tumours, pelvic abscess, organic disease, &c. &c. This can be done with certainty and satisfaction only by the *uterine bougie*. —(Plate I.) This instrument can be readily and safely passed into the uterine cavity, and thus enables us easily and directly to ascertain the direction of that cavity, and hence the exact position of the body, and fundus of the organ itself. When the uterus is in its normal position, the point of the instrument passes upwards and forwards in the direction of the umbilicus, and the concavity of the instrument (or the rough side of the handle) is directed towards the symphysis pubis. But when the organ is retroverted, the point of the instrument can only be passed backwards horizontally towards the hollow of the sacrum, and with the rough side of the handle looking towards the sacrum instead of towards the pubis. In addition to the *direction* of the organ, we can ascertain also, by tactile examination, that the point of the instrument is lodged in the centre of the tumour. Further, by turning the bougie round, we can replace the uterus, and feel it through the abdominal parietes in front, and retrovert it again at will.—(See Plate I.)

3. *Treatment of Retroversion.*—"When recent," says Dr Simpson, "and occurring after some straining effort, or from congestion and inflammation of the uterus, or subsequent to delivery, mere replacement of the organ by the bougie or finger will sometimes suffice, provided, along with it, we enforce for a length of time the horizontal position, or rather lying on the side or face, prevent over-distension of the rectum and bladder, reduce any local congestive or inflammatory state that may be present, and restore the local tone of the relaxed soft structures of the pelvis by astringent vaginal injections, or the use of medicated pessaries made with ointment containing extract of oak-bark, or tannin, or iodide of lead," &c.

This simple treatment, however, rarely succeeds. And it is necessary to replace, and by means of instruments to maintain, for some time the organ in its natural position. Before resorting, however, to these means of permanent cure, it is sometimes expedient to remove or diminish any morbid action that may be in any way the cause of the displacement.

The organ, then, is to be replaced by means of the uterine bougie, and a permanent uterine pessary to be introduced

[1] We are indebted to the kindness of Professor Simpson for the two accompanying plates, which were originally published in the *Dublin Journal* along with his own paper.

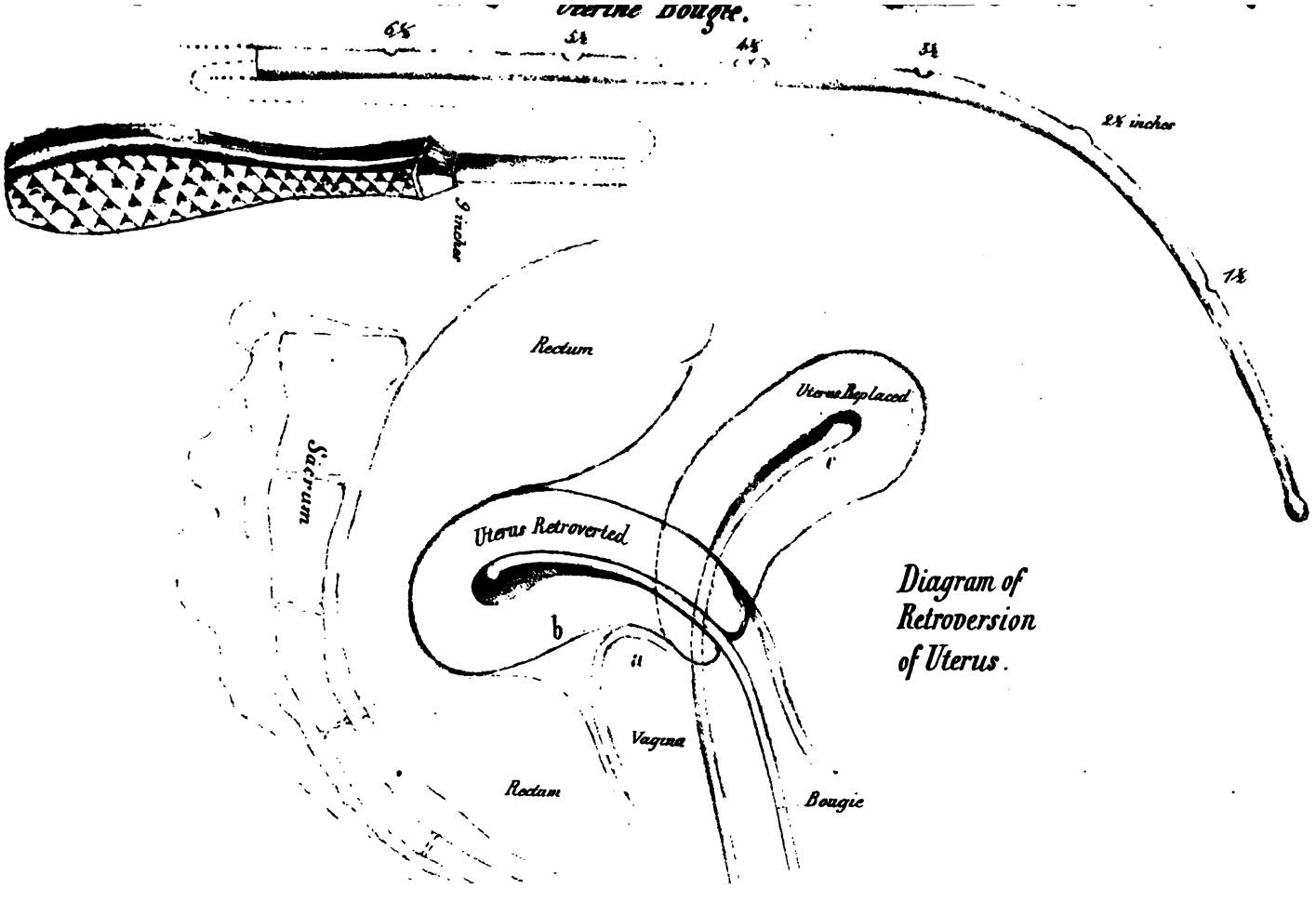
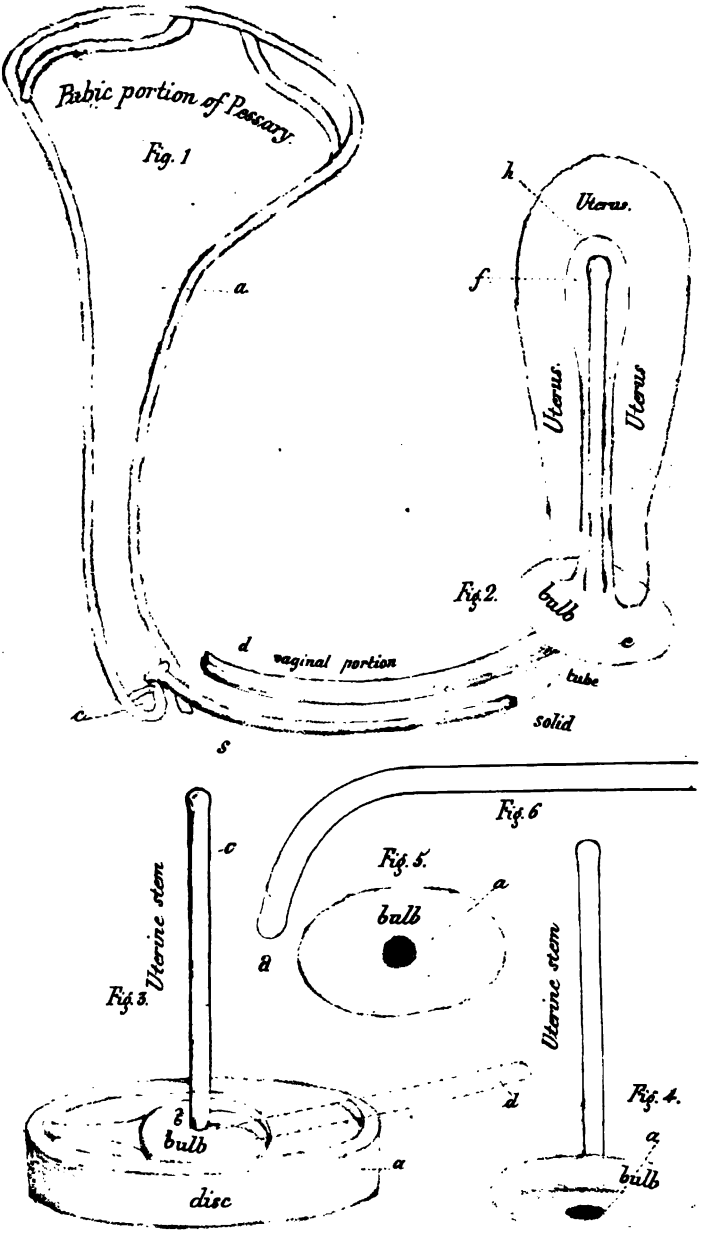


Diagram of Retroversion of Uterus.

Plate I. Dr Simpson on Retroversion.

Plate II. Pessaries for Retroversion &c.



Printed by F. Schenck

Dr Simpson figures and describes three modifications of pessary to be used in different cases. They are made of German silver, and may require to be worn one or two weeks, or even many months in some cases. Their employment will cure many, but by no means all cases of retroversion; but, even when not sufficient to cure, they will generally relieve and palliate the annoyances and sufferings of the patient.

The first form of pessary (Plate II. Fig. 4) is composed of a stem two and a third inches long, to be introduced into the uterine cavity, and a bulb upon which the lips of the cervix uteri rest. On the lower surface of the bulb (Fig. 5) is an orifice, into which is introduced the end of a handle (Fig. 6) about eight inches long, and by means of which the pessary is passed. It is more useful in cases of antiversion than of retroversion; but it is imperfect, from the impossibility of retaining it above a few days, the canal of the cervix relaxing and dilating, and allowing its escape. It is often useful for dilating the cervix in cases of stricture, where the hysterotome is not employed.

The second form of pessary (Plate II. Fig. 3) has a similar uterine stem and bulb, and in addition, a large ovoid disc (*a*) 2½ inches in length, 1¼ inch broad, and ½ an inch in depth. The uterine stem (*c*) is moveable from the position *fc* to the position *fd*. This is necessary to facilitate the introduction of the instrument into the genital canal. On the lower surface of the instrument is a spring-catch to hold the stem fixed and upright after the instrument is introduced, and capable of being unlocked by the nail when the instrument requires to be withdrawn. The disc from its size and shape retains its place in the vagina, and keeps the uterus fixed, but when the tendency of the uterus to displacement is great, this form of pessary is sometimes inadequate to retain it in its normal situation.

The third form of uterine pessary is composed of two parts, *first*, an internal (Fig. 2) having a stem (*f*) and bulb (*e*), like the two last forms, and in addition a tubular vaginal portion (*d*); *secondly*, an external part (Fig. 1) consisting of a framework to maintain the internal portion *in situ*. This external part is about 5 inches long, expanding from ½ an inch at its lower, to 3 inches at its upper part. From its lower or vaginal extremity projects, nearly at right angles, a flat stem (*s*), fitted to slide into and fix in the corresponding open tube (*a*), attached to the bulb of the internal half of the instrument (*b*). In the plate, the uterus (*f*) is sketched, having in its cavity (*h*) the stem of the pessary. The internal half of the instrument is first introduced, and, by it, the uterus placed *in situ*. Then the external part is locked into it, and bent and moulded so as to fit to and fix upon the pubis. Nothing further is required, in general, to keep it in this position than the wearing a common napkin or understrap.—*Dublin Quarterly Journal of Medical Science*, May 1848.

269.—*Spontaneous Expulsion of an Uterine Tumour after Delivery.* By Dr Eldredge.—We have great pleasure in noticing the following remarkable case, in which a large uterine tumour, probably of the ordinary fibrous character, was enucleated and expelled without artificial interference. It is probable that, consequent on delivery, inflammation and sloughing of the uterine tissues between the tumour and the cavity of the uterus had taken place, and that the mass had been expelled by the uterine contractions, to which its own presence in such a state would give rise. It is particularly interesting and instructive as affording another instance of nature's own process for the cure of this malady.

The mother, æt. thirty-seven, had borne her last child seventeen years previously. She had, since then, enjoyed very good health; and her pregnancy presented nothing peculiar excepting an apparently very rapid and extraordinary increase of her size. The labour presented no remarkable or very serious peculiarity, except its protraction, and that force was required to bring out the head, the breech having presented. The child was dead. After complete delivery, the uterus continued so large as to excite a suspicion of the presence of twins. After about an hour, an examination was made per vaginam, and the uterus found to contain a hard unyielding tumour, of the size of an adult's head or even larger, its surface presenting the appearance of granulations, without any investing membrane, and internally its structure was fibrous and extremely hard, firmly imbedded in the muscular texture of the uterus, and attached to it over a large surface. At its margin it could be separated from these attachments by the fingers, but soon the finger reached adhesions so firm, as to be incapable of dividing them. She was at this time full as large as a woman at the full time. For two weeks, she had frequent febrile attacks. At the end of this time the tumour began to diminish slightly, and the discharges became very fetid and offensive; but her

general health steadily improved. Thirty-eight days after her confinement, the tumour was discharged without any pain. It was very fetid, and had evidently been detached for some time. The tumour weighed two pounds, and measured five inches by three, even after suffering so much from breaking down and decomposition.—*Boston Med. and Surg. Journal*, Feb. 2, 1848.

270.—*Imperforate Vagina, with apparent Spontaneous Ovulation and Formation of Graafian Vesicles.* By M. LOCATELLI.—A girl of twenty-six years of age had enjoyed good health till she was twenty, when she was attacked with severe pain in the kidneys and the lower and anterior part of the abdomen—returning periodically at monthly intervals, and disappearing after four or five days. These were considered by a medical man as arising from menstrual uterine congestion, as she had never menstruated during the six years.

The patient, gradually declining in health, submitted to an examination, when it was found that the vagina was closed for about half its extent by a membrane. There was a large tumour above the pubis, about the size of a child's head; it yielded slightly to pressure, which was felt to act on the vaginal closing membrane when the finger was applied during pressure on the abdominal swelling. The pulse was feeble and frequent—she was subject to hysteria.

The evacuation of the contained blood seeming the only remedial measure indicated, an incision was very gradually made with a bistoury held along the fore-finger, when there was an immediate discharge of between six and seven oz. of a dark clotted fluid like blood mixed with mucus. The flow was aided by pressure on the abdominal tumour, which was reduced to a third of its original bulk.

During the operation, the patient only complained of slight pain while the pressure was applied to the abdomen—but in the course of a few hours, convulsions with painful sensation, with a return of the swelling of the abdomen, at once indicated the commencement of peritoneal inflammation, which in spite of *two blood-lettings* terminated fatally in the course of two days.

On dissection at the end of forty-eight hours, there were distinct traces of peritonitis, with sero-purulent discharge, especially in the left iliac region, where there was a slight admixture of putrid blood. The uterus was of the size of a fist. The Fallopian tubes adhered strongly to the posterior surface of the ovaries, and were distended, the left about the size of a turkey's egg, while the right was not larger than a nut. The left was ruptured, from which dark blood flowed similar to what had been found in the left iliac region. The membrane closing the vagina was two lines in thickness, and the cavity of the uterus was not larger than usual.

On a more minute dissection, the expanded fimbriated tubes adhered to the surface of the ovary by loose areolar tissue, communicating with the uterus by a very slender canal. There were two tumours containing black blood, similar to that discharged by the operation. That of the left side contained four or five vesicles the size of millet seed, round, transparent, and full of a straw-coloured fluid. Judging anatomically, they appeared to be ovules detached from the ovary, which had undergone a partial development similar to what occurs before arriving at the uterus.

The ovaries had their surface very irregular from the many old cicatrices as well as more recent. There were many Graafian vesicles internally more or less developed and transparent, similar to corpora lutea. There were some other large vesicles full of blood, which were certainly Graafian, from which the ovule had been discharged a few days before, as they were found on the periphery of the ovary, and corresponded to the more recent of the external cicatrices.—*Gazette Médicale*, 1848, No. 6.

[There seems little doubt that the rupture of the Fallopian tubes excited all the peritoneal symptoms which ended fatally; without pressure, the discharge might have been slower, but the event would perhaps have been more favourable.]

271.—*Transfusion in Excessive Uterine Hemorrhage.* By Dr WALLER.—Among some cases of placenta prævia, detailed in the *Medical Times* by Dr Waller, we find three in which he resorted to transfusion, on account of the state of extreme prostration produced by the flooding consequent on the partial separation of the placenta. In spite of Dr Waller's very energetic treatment, two of the mothers sank, one of them undelivered. In the third case, the transfusion appears to have been of decided benefit.

1. This was the case of a delicate lady pregnant for the first time. She had had flooding repeatedly at intervals during a month, and it was greatly increased when labour came on. The child presented by

the feet, and was brought down by some traction. The placenta, which was adherent, required to be removed by the hand. "The blood all this time was flowing in alarming quantities. Stimuli were given internally, and cold applications used externally, by which the flow was checked. The pulse did not rally: it was imperceptible at the wrist, and could scarcely be distinguished in the carotids; the eye was set, the jaw dropped, and the breathing very laborious. Although the patient seemed *in articulo mortis*, I determined to give her the benefit of transfusion. The vein was promptly laid bare by Mr Gravenor, but now an unexpected difficulty presented itself. As soon as the puncture was made in the arm of the man who had consented to supply the blood, he became faint, and there was a slight trickling only from his vein; some brandy and water was given him without avail. Another person was procured; but by the time we were prepared to operate, all was over, the breathing had ceased." Still, two or three ounces were injected, but, of course, in vain.

2. When called to this patient, Dr W. found her *in articulo mortis*. No pulse at the wrist, or movement of the heart felt. The bleeding had ceased. She still continued breathing, and three charges of the syringe (two oz. each) were thrown into her veins, but without any perceptible effect.

3. This was a case of partial placental presentation, with very alarming hemorrhage. Her countenance was completely blanched, lips pale and livid, extremities cold, respiration laborious, pulse scarcely perceptible. Stimulants had been given without effect, and, as the symptoms of exhaustion increased, it was determined to perform transfusion. After injecting five ounces of blood, the improvement was manifest; pulse stronger, countenance of better aspect. About two hours and a half afterwards she again began to sink, and again four ounces of blood were injected, but without any improvement in the patient. A new subject was sought to furnish the blood. "The husband of the patient, being in the room, came forward to our aid; he looked rather pale, and therefore we gave him a glass of hot spirits and water, and then opened a vein, from which the blood flowed in an impetuous stream. The first injection of about two oz. produced a marked alteration on the pulse; it became decidedly perceptible. When nine oz. had been injected, the countenance was much improved; there was even a slight appearance of colour in the cheeks, and pain in the arm was complained of. Four oz. more were introduced, when all symptoms of immediate danger vanished." In a short time pains returned, and she was safely delivered. She recovered.—*Medical Times*, 1847-1848.

VI.—MATERIA MEDICA AND THERAPEUTICS.

272.—*Quinine a Prophylactic of Puerperal Fever.* By Dr Leudet of Rouen.—It was during an epidemic of puerperal fever, which occurred in the hospital of Rouen in 1843, that the author first thought of ascertaining by experiment whether quinine possessed the power of enabling the economy to resist the contagion of this disease. From the 21st September 1843 to the 8th January 1844, 83 women were delivered in the Hôtel Dieu of Rouen; in 9 of these women to whom quinine was given not one case of puerperal fever occurred, while of the remaining 74, who received no special treatment, 21 suffered from the disease. In two later epidemics, its utility was subjected to a more extensive trial. From the 8th of July to the 9th August 1845, of 26 cases of delivery, 15 were treated with quinine; one only of these was attacked, while of the remaining 11, 8 had puerperal fever. Lastly, during an epidemic which prevailed in Rouen from the 19th of March to the 21st of April 1846, there were 36 deliveries. Quinine was prescribed to 17 women, only one of whom had fever, while of the 19 who were submitted to no special treatment, 11 were attacked with the disease.

Dr L. begins the prophylactic treatment about four hours after delivery, by the administration of five grains of quinine; which dose is repeated twice during the same day at intervals of five hours. On the second day the same doses are given; but on the third day they are diminished to three grains thrice daily, and are so continued for four days more.

This method is adapted for the more common form of epidemic, where the fever does not present itself for three or four days after delivery. When it appears during parturition, or immediately after it, Dr Leudet advises that the use of quinine should begin with the first symptoms of labour.—*Thèses de Paris*, 1847, *from L'Union Méd.* April 8, 1848.

273.—*On the Presence of Arsenic in Mineral Waters.*—By MM. CHEVALLIER and GOBLEY.—The existence of arsenic in mineral waters was first detected in 1840 by M. Tripier, who found it in an African spring. More recently Walchner established the presence of both *arsenic* and *copper* in several of the ferruginous waters of Germany. The authors of the present paper have examined nearly a hundred different mineral springs to ascertain the presence or absence of arsenic. Their researches show, (1) That arsenic is not found in chalybeate springs alone, as Walchner supposed, but may be detected in other kinds both cold and thermal.

(2) That it exists only in very small quantity, which, though possibly large enough to exercise some action on the animal economy, and modify the therapeutic properties of the water, is never sufficient to occasion any deleterious effect.

Of the numerous springs in which they succeeded in obtaining traces of the metal, the following are a few of those more generally known :—Royat, Vichy, Saint-Mart, Hermonville, Mont-d'Or, Spa, Provins, Wiesbaden, Pyrmont, and Ems.

They have not been able to determine the condition in which the arsenic exists. —*L'Union Méd.* April 11, 13, 1848.

274.—*Carbonic Acid Gas as a Therapeutic Agent.* By Dr KUSTER of Cronthal, near Frankfort.—The mineral springs of Cronthal contain, in addition to soda and magnesian salts, a large proportion of free carbonic acid gas, or nearly one and a quarter cubic inches of gas for every cubic inch of water. In the treatment of disease, the gas is administered in a variety of ways. For introduction into the stomach, Dr Küster says, that it may be drawn into the mouth through a flexible tube, and then swallowed as if it were a liquid (?). Injection into the rectum forms another and a very efficient mode of using the gas internally. A large quantity of it may be thus introduced into the intestines without giving rise to irritation. Externally, the remedy is employed in the form of local and general gas baths, or a stream may be directed against a particular organ, as the eye or ear, forming a gas-douche.

The bath, after some minutes, produces a strong feeling of tingling and warmth of the surface, which is usually followed by copious perspiration. In torpid patients it is sometimes necessary to raise the temperature of the bath, by mixing a quantity of vapour with the gas. The patients remain from fifteen to thirty minutes in the bath, whith may be repeated once, twice, or even oftener, daily.

Dr Küster has used these baths very extensively in the treatment of various diseases, and has found them especially useful in rheumatism, gout, St Vitus' dance, and intermittent fever. In the last mentioned disease, their success appears to have been very decided, a complete cure having been generally obtained after the third bath.

As a local remedy, the carbonic acid gas has been used by the author chiefly in diseases of the ear and eye. It was introduced into the external meatus in cases of deafness with occasional advantage. Applied to the eye, the gas-douche occasions pain, increased vascularity of the conjunctiva, and a copious flow of tears. In rheumatic, catarrhal, and scrofulous ophthalmia, the douche alone, or combined with the general bath, has been followed with marked benefit. It is said also to be serviceable in dissipating opacities of the cornea.—*Schmidt's Jahrbücher*, p. 295, 1848.

275.—*On the Indian Hemp.* By M. COURTIVE. — The following conclusions may be drawn from M. Courtive's observations on this plant :—

(1.) The active principle of the Cannabis Indica collected at Algiers, is a resin which, in the dose of one grain, produces the same effect as half a drachm of the ordinary extract. (2.) The C. Indica collected in France furnishes a resin less active, and in less quantity than the same plant from Algiers. (3.) The C. sativa of France gives an analogous resin, but much less active. (4.) The same plant grown in France from seeds obtained in Italy, furnishes a resin of greater activity than the former. (5.) The active principle of the Cannabis resides chiefly in the leaves. (6.) The botanical characters of the C. Indica and sativa are not sufficiently distinct to form two species.—*Gazette Méd. de Paris*, May 1848.

276.—*Tartrate of Potash and Iron.*—Though long a member of the Pharmacopœia, this salt is at the present day little used. Its properties have been carefully studied by Soubeiran (*Traité de Pharmacie*), who formed a high opinion of its therapeutic value, and recommended it strongly as "probably possessing more advantages than any other ferruginous preparation." These are, its weak styptic taste, ready solubility in water, and fixity of composition in the presence

of acids and alkalies, by which are prevented those chemical changes in the intestines which render other martial compounds in part inert. It is easily borne by the stomach even in large doses, and does not constipate. In one case, where its use was continued for a long period, it is said to have changed the colour of the hair from light to dark,—a fact which supports Dumas' view, that the system frees itself of an excess of iron by the hairs. According to Mialhe, it is composed of two equivalents of tartaric acid, one of potassa, and two of the sesquioxide of iron, of which it contains thirty per cent by weight. It is best prepared by dissolving one part of bitartrate of potassa in six parts of water, and then adding as much moist hydrated peroxide of iron as the liquid will dissolve. Filter and evaporate at a low temperature; at 120° R. decomposition takes place,—carbonic acid is disengaged, and a precipitate forms of the tartrate of the protoxide.

The dose is from ten to thirty grains; but it may be given to the extent of a drachm and upwards. It may be made into pills with mucilage. The following formula is convenient for children:—Syrup 500 parts, ferrotartrate of potassa and cannella water, of each 16 parts.—*Traité de l'Art de Formuler*, p. 192, and *L'Union Médicale*, No. 2, 1848.

[An excellent chalybeate drink is formed by adding from ten to twenty grains of the tartrate to the bicarbonate of soda of an ordinary effervescing powder. The styptic taste of this preparation is very weak, although it contains more iron than most ferruginous waters.]

M. Ricord has found this salt of decided service in the treatment of phagedenic ulceration of the genital organs. He gives it in solution to the extent of from one to eight drachms daily. At the same time it is applied externally in the form of a wash to the diseased part.—*Gaz. Méd. de Paris*, 26th April.

277.—*Quinidine a New Alkaloid in Cinchona Bark.* By M. WINCKLER.—This alkaloid occurs in one of the new barks most resembling Huamalies, where it is accompanied by quinine, though the latter is present only in small quantity. Quinidine crystallizes from its solution in alcohol in crystals resembling amygdaline, which are somewhat hard, like sugar to the touch, and appear under the microscope to be colourless rhombic tablets It is more soluble in alcohol than cinchonine, less so than quinine, and is very sparingly soluble in water. Sulphate of quinidine can scarcely be distinguished from sulphate of quinine, and it only differs by its greater looseness from cinchonine precipitated by ammonia from a solution of its sulphate. The compound of chloride of quinidine with chloride of platinum, cannot be distinguished externally from the corresponding quinine salt. It leaves 26·4 per cent. of platinum.

When sulphate of quinidine occurs in sulphate of quinine, the solution of the mixture is precipitated by carbonate of soda, and the alkaloids dissolved in alcohol of spec. grav. 0·863. The quinidine soon crystallizes.—*Buchner's Repertorium*, Vol. xlviii. p. 385, *and Chemical Gazette*, No. 132.

278.—*On Crystallized and Amorphous Quinine and Cinchonine.* By M. WINCKLER.—Winckler has ascertained that cinchonine is converted into the amorphous condition by the action of an excess of sulphuric acid. And he has found that the so-called quinoidine contains both amorphous quinine and cinchonine in variable proportions, according to the duration of the action of the sulphuric acid in the preparation of these alkaloids, and the nature of the barks.

Some amorphous cinchonine was accidentally formed in the preparation of the sulphate of cinchonine, by adding a rather large quantity of concentrated sulphuric acid at once to the test mixture, and then heating it somewhat strongly. In consequence of this treatment, only one-third of the cinchonine separated in coloured crystals, and on the subsequent addition of alkalis a dark brown matter like turpentine was thrown down. The author has examined the properties of this substance, and compared them with those of the matter left behind when quinoidine is treated with ether for the preparation of the amorphous quinine, and has shown them to be perfectly identical. When heated cautiously in a tube, they both give a crystalline sublimate exactly like that obtained from crystallized cinchonine under similar circumstances; and the odour of quinoile, which is apparent on heating both amorphous and crystallized quinine, could not be observed. The author concludes from his experiments, that the amorphous quinine and cinchonine are formed by the action of acids upon the alkaloids during their preparation. He believes that quinine is not so readily converted into the amorphous condition as cinchonine, and a quinoidine containing little or no amorphous quinine, probably obtained in preparing sulphate of quinine from barks containing both alkaloids.

The author also shows that hypo-sulphite of soda throws down hypo-sulphite of quinine as a dazzling white precipitate, from the solution of the muriate of quinine; cinchonine separates under similar circumstances in four-sided needles. As the amorphous alkaloids do not give those reactions, the author employs them as a means of distinguishing the presence of the crystallized alkaloids in quinoidine.—*Journal für Pract. Pharmacie*, Vol. XV. p. 281, *and Chemical Gazette*, No. 130.

279.—*Physiological Action of the Iodide of Potassium.* By M. M. Bois de Loury and Costilhes.—In an article on the therapeutic action of different medicines used at St Lazare, in the treatment of syphilis, these gentlemen remark that they have paid particular attention to the effects produced by this medicine, and that they occur in the following order:—

1. *Action on the Intestinal Canal.*—The first day, the dose being 0·75 gramme (10 to 12 gr.) slight pain and heaviness in the stomach: the pain is, however, not always present; the appetite is usually increased; it is remarkable how soon after the taking of the iodide the desire for food arises.

The following days these symptoms diminish or disappear. The second day, the dose being 1·00 gramme (upwards of 15 grs.), heaviness of the head, colic, and diarrhœa.

2. *On the Urinary Secretion.*—This is more abundant the first day, that is, the patient passes more than he drinks. This symptom is almost constant. The urine is clear and transparent—the patients urinate more by night than by day. Sometimes, however, the urine is not increased.

3. *Eruption.* The most frequent is the pustule of acne, which shows itself from the end of the first to the second day. It most frequently occurs on the face; it does not usually last as long as the treatment, that is, it disappears in 15 or 20 days. Ecthyma more rarely, Neither papular erythema nor purpura hemorrhagica were observed; in one case an eczema impetiginoides was seen.

4. *Pruritus* very seldom observed.

5. *Conjunctivitis.*—The conjunctiva was sometimes influenced when the iodide was given in doses of 1 to 2 grms. Both conjunctivas may become inflamed. It principally occurred during the first days of the use of the medicine, and was characterised by general vascularity and chemosis.

6. *Menstruation.*—Although this medicine is spoken of by most authors as an emmenagogue, they often remarked a decrease in the quantity of the menstrual fluid. Once the discharge re-appeared a week after the menstrual period; but this may have been only a coincidence.

7. *Discharges* from the uterine cavity were not perceptibly increased.

8. As invariable and immediate effects, the authors never once failed to see the decrease or suspension of the pains of the bones after the first or second day of treatment. No other antisyphilitic agent possesses so prompt and constant an action.

9. *Salivation.*—This is a rare symptom in women, it was only seen once. M. Ricord observed it more frequently, perhaps, because he gave the medicine in larger doses. The saliva remained thin, the mucous membrane of the mouth uninflamed and unaltered; the salivary glands not swollen—a true hypersecretion, without peculiar smell.

10. *Effects on the Circulation*, none.

11. *Accidents produced by the Iodide.*—The authors object to giving the iodide in such large doses as some physicians administer it. M. Biechy relates two cases in which serious accidents were produced. In the first, the patient being benefited by doses of three-fourths of a grain, gradually increased to fifteen grains, thought by doubling the dose to double the advantage received. The three first days he suffered from general uneasiness and intense headache; the fourth day he was affected in his lower limbs, his sight disturbed, and his hearing almost gone; on trying to walk, his legs gave way under him, and his arms had lost all power. Finally, having taken a few steps, he fell unconscious; on coming to himself, he remained in a state of languor and weakness, which did not disappear for several days after the suspension of the medicine. In the second case, death ensued; but it was doubtful if it could be attributed to the iodide.—*Gaz. Méd. de Paris.*

280.—*Clinical Notes taken in the Hospitals of Paris and Vienna.* By Dr Alexander Fleming. *Contra-indication of Iron in Chlorosis.*—Prof. Trousseau has frequently observed females who have passed several years while labouring under chlorosis without displaying any tendency to phthisis, and in whom the exhibition of chalybeates and removal of the chlorotic symptoms, have been followed by the immediate development of pulmonary disease, proving subsequently fatal. These observations induce him to believe that the chlorotic condition offers a certain immu-

nity from tubercular disease, and that as a rule iron ought not to be administered to chlorotic females, if formerly they have shown any suspicious tendency to chest affection, if they present cicatrices of previous tubercular disease, or if they are born of phthisical parents. He contents himself in such cases by supporting the patient's strength, and avoids the use of iron in every form.

There is no difficulty in supposing that the peculiar condition of the blood in chlorosis, may render the system less disposed to the development of tubercle; and the observations of Trousseau, having so important a practical bearing, merit the attention of the profession. At the same time, we should receive with caution any new doctrine of antagonism in disease. The prevalent views on this subject, in relation to phthisis and intermittent fever, phthisis and goitre, scrofula and rickets, &c., are not founded on correct observation.

On the Abuse of Alkaline Remedies. By Professor TROUSSEAU.— Alkalis exercise a powerful influence on the economy. Their continued administration renders the blood more alkaline, and induces important chemical changes in the secretions. Those which are naturally alkaline become more so, and those which are acid become less so, neuter, or even alkaline. The presence of free acids in the stomach being essential to the digestion of certain elements, their neutralization will necessarily interfere seriously with this important function. A due proportion of alkalis in the blood endows it with the property of burning to a certain extent the carbonaceous elements, as sugar, starch, alcohol, absorbed in the process of digestion. An imperfect combustion gives rise, it is true, to morbid symptoms; but a too great or too rapid combustion, on the other hand, is no less fraught with evil, and occasions important changes in the compesition of the blood, and consequently in the texture of the organs. When alkalis are taken in large quantity, and during a long period, the blood becomes more fluid, and the patient gradually sinks into a cachetic condition, characterised by paleness, debility, general tumefaction of the tissues, passive hemorrhages, and finally emaciation. Among the frequenters of the mineral waters of Ems, Vichy, and Carlsbad, Trousseau has seen several melancholy illustrations of the above remarks; and in his lectures, he details the case of one of the most distinguished chemists of France who nearly fell a victim to the cachexia thus induced. It is the more necessary to point out this danger, as, from its insidious character, suspicion may not be excited until severe injury to the patient's health has been sustained. Physicians prescribe a two or three months' course of alkaline waters with perfect indifference. It should be kept in remembrance, that, like many other valuable drugs, they are powerful for evil as well as for good.

Nitrate of Silver in the Diarrhœa of Children. By Professor TROUSSEAU.—The following practice, which I have seen adopted with marked success in the Hôpital Necker, Paris, is only had recourse to in obstinate cases, and where ordinary remedies have failed. If mucosanguineous secretion and tenesmus are present, indicating an inflammatory condition of the mucous membrane of the colon, an injection composed of from one to two grains of nitrate of silver, and eight ounces of water, is prescribed night and morning. When this clyster has been expelled, another is given consisting of tepid water, to which one drop of laudanum has been added.

But when the diarrhœa is accompanied by nausea and vomiting, and the dejections are serous and of a green colour, indicating the small intestines as the seat of the disease, the nitrate is given by the mouth.

℞ Nitrat. Argenti . . .	gr½
Aq. Distill.	ʒvi.
Syrup Simp.	ʒiv.

Of this mixture, from two to eight teaspoonfuls may be prescribed according to the effect produced. Professor Trousseau has seen no bad results from the internal administration of the nitrate in children; on the contrary, it has proved a valuable remedy in many troublesome cases.—(*To be continued.*)

VII.—FORENSIC MEDICINE AND TOXICOLOGY.

281.— *On the Determination of the Nature of certain Spots found on a Blouse.* By ISNARD and DIEU.—The blouse given for examination to Messrs Isnard and Dieu, presented behind, over the middle and lower part, exactly at the part corresponding

to the hips in the sitting posture, a spot about two inches long and an inch and a half broad, and a second about half an inch in the perpendicular direction, and three quarters of an inch across. These two principal spots were surrounded and united by a considerable number of spots of the same description. Over the middle of the left sleeve, corresponding to the elbow, there was a similar spot. These spots gave to the stuff a density and stiffness not discoverable elsewhere; their colour was a dirty brown red—and there was an appearance as if a part of the colouring matter had been removed by water. These spots were treated as for blood-stains, yet in some respects failed to afford the usual indications—thus in repeated trials, the liquid obtained by maceration remained green after the separation of the coagulum as seen by reflected light, and rose-coloured as seen by transmitted light, which colours should not have arisen without the addition of potassa—and though ammonia did not change the liquid obtained by maceration, yet it was not precipitated by chlorine as should have happened, since it was considerably charged with colouring matter—lastly, the effect of maceration on the spot was not to leave a thin grey layer of fibrine, as should have been the case in the event of a blood-stain. They then had recourse to the microscope, but without effect. By further experiments, however, the animal nature of the spots was sufficiently determined. And what else but blood spots could be containing albumen and red colouring matter, undergoing no change of colour under the action of ammonia (as would have happened in the case of vegetable colouring matter), and showing no signs of being of a fatty nature? Though then it seemed impossible that these spots could be any thing else but blood; yet as there was an absence of some of the acknowledged indications, the medical men gave it as their opinion that there was a strong presumption in favour of the spots being blood, but that it was not a matter of absolute certainty.—*Gazette Médicale de Paris, Mars* 11, 1848.

282.—*Poisoning with Mace.* By Dr WATSON of Liverpool.—The person affected was at a sale where there were samples of mace, and ate, in the course of an hour and a half, as much as, when broken small, could be lifted on a teaspoon. Immediately after he felt pain on the crown of the head, over a space about the size of a penny piece, along with slight nausea, as if, the patient said, he had been smoking inordinately. These symptoms continued without increase for two and a half hours, when the patient dined. He rose from dinner, and looked out at the window to dissipate, if possible, this uneasy feeling, when, all at once, he felt the blood rush to his head, creating a sensation as if an electric current had passed from the crown of the head downwards. He made an effort to get down-stairs and then he felt twice a sensation such as he thought a person would experience who had become nearly insensible from cold, and, if he had yielded to it, he imagined that he could have slept away out of existence without pain. He then shivered, and, laying himself on a sofa near a fire, he suffered, by turns, the extremes of cold and heat. There was precordial anxiety, which induced the surgeon first called in to administer hot brandy and water; but finding this of no use, he exhibited an emetic of sulphate of zinc and ipecacuanha, which brought away some trifling portions of masticated mace. When Dr Watson now first saw him, the feet were cold, and required warmth, the head throbbed, the eyes looked injected, the countenance had a singular expression, whilst the words he employed seemed selected for their merit of being the opposite to what should have been used. Camphor mixture, and compound spirits of ammonia, with chloric ether and purgatives, were used. The forehead was kept cool by a spirit lotion. It was some days before the intellectual disturbance entirely disappeared.—*London Medical Gazette*, 11th February 1848, and *Provincial Medical and Surgical Journal*, 26th January 1848.

283.—*Attempt on the Chastity of a Young Girl—Death from a different cause.* By PROFESSOR TOURDES of Strasburg.—A girl of eight years of age died some weeks after an attempt on her chastity by a man aged forty. As the man had already confessed this and several other such attempts on girls from eight to ten years of age, the belief became prevalent that her death was owing to this cause. On investigation, however, it was discovered that the girl had died of measles of a typhoid form accompanied with pneumonia. On inspection after death the body was found emaciated; there was no trace of old or recent violence; the hymen was of a semilunar form and uninjured; the two lungs infiltrated with grey and yellow tubercles, and the seat of a red lobular hepatization; the bronchial tubes had a brown tint, and contained much muco-

purulent matter; the heart contained a little dissolved blood; the mouth was dry and brown; the mucous membrane of the stomach was of a vivid red; and follicular patches, round and elliptical, occupied the lowest portion of the small intestines.

The evidence that an attempt had been made was in so far conclusive, as the fact being admitted both by the child and the accused; but the narrowness of the parts had rendered penetration impracticable, and no serious violence had been done. It was not, then, a case of rape or attempted rape, but an attempt on the chastity at a tender age without any violence.—*Gazette Médicale de Strasbourgh*, Mars 20, 1848.

284.—*Viability.*—The question as to the age of viability in an infant was raised on the occasion of the birth of a female infant, born, according to the mother's calculation, in the sixth month, which lived a day. It was nearly fourteen inches long, (35 centimetres); its weight was about two pounds, (755 grammes); the umbilicus was more than half an inch (1·5 centimetres) below the middle point of the body; the circumference of the head was 8·746 inches (22 centimetres); the fontanelles were very small; the lungs weighed little more than six drachms; the respiration had been complete; there was meconium in the ileum and great intestine. There was no morbid appearance to explain the cause of death. The infant had received every due attention, and every thing showed that the defect of maturity was the sole cause of the failure of life. This, then, was a case of the birth of a living but not viable infant in the sixth month.—*Ibid.*

285.—*Paternity.*—The paternity of a child was charged on a man who had had intercourse with the mother on one occasion, only 190 days before the birth. The examination of the infant three days after its birth showed that it was very red, of moderate embonpoint, lively, crying with force, drinking greedily; the eyes quite open; its weight between seven and eight pounds (3375 grammes); its height nearly nineteen inches (48 centimetres); the umbilicus more than half an inch below the middle point of the body; the circumference of the head nearly fourteen inches (35 centimetres); the parietal diameter 3·733 inches (9·5 centimetres;) mento-occipital 4·909 inches, (13 centimetres); the frontal 4·616 inches (12 centimetres;) the testicles in the scrotum. From these characters it was concluded that the infant had reached maturity, and that it was impossible it could have been born after a gestation of only six months and seventeen days.—*Ibid.*

286.—*Infanticide.*—The body of a female infant was found in an outhouse covered with a bloody shift. The infant though small was mature; its height about eighteen inches (47·5 centimetres); its weight nearly seven pounds (2235 grammes); an osseous point existed in the cartilage of the lower end of the femur. The body was well formed and viable; the respiration had been deep and general; the lungs weighed 1½ oz. (39 grammes). There was some froth at the bifurcation of the trachea; the velum of the palate, the epiglottis, the base of the tongue, the trachea, and the bronchi were of a vivid red; the heart contained liquid blood, with no trace of coagulation; the lungs showed a well marked congestion, as did the brain. These characters coincide with those of death by asphyxia. Can the cause, then, be discovered? There are evident traces of compression at the entrance of the respiratory passages; the lips are thin, red, dry; the right side of the neck presents the trace of strong compression, a print red and dry, produced by the ball of the shoulder, towards which the head had been directed by the constrained attitude in which the infant was found as tied in the shift. A strong pressure had plainly been made on the mouth and on the neck; but had this pressure been made during life? The marks are not decisive. A careful dissection showed no sign of erosion of the skin, or of ecchymosis in the subjacent parts. The compression may have been made during life, and the coincidence of death by asphyxia gives a great degree of probability to this conjecture; but it is the duty of the physician to arrest his conclusions at the point where facts fail him; the signs characteristic of such a lesion during life not being present, he is not entitled to affirm that compression has been the cause of death, at the same time that he does not suppress the probability of such having been the case.—*Ibid.*

287.—*Crushing of a Hemisphere of the Brain; continuance of life for twenty minutes.*—A child, three years old, was thrown down by a heavy carriage, one wheel of which passed over the head. The child breathed for twenty minutes without showing any sign of consciousness; the head was flattened laterally; there was great mobility of the bones on compression; the integrity of the cranial integuments contrasted remarkably with

the extent of the internal injury. Portions of the occipital, of the left parietal, and of the left temporal bones were depressed towards the brain; and the dura mater, torn at the place of the fracture, gave passage to a red mass squeezed out of nearly the whole extent of the left hemisphere. The right hemisphere was uninjured. There is nothing else remarkable in this case, than the continuance of life for twenty minutes after an injury of a character so vital.—*Ibid.*

288.—*Death from Wound of the Internal Mammary Artery.*—A man in a quarrel received a wound by a pointed and cutting instrument, the precise character of which was not discovered, in the internal mammary artery. He lost much blood at the time, and being brought to the Strasbourg Civil Hospital, he received the attentions due to such a case, no serious apprehensions of the result being entertained. He made no complaint next day, but in the evening, about twenty-four hours after receiving the wound, he was seized with a sudden agitation, sat down on his bed, and expired. Inspection after death showed six wounds and two insignificant contusions; of the wounds three were superficial, and three penetrating—two of the abdomen, one of the chest. This last was obviously the cause of death. The instrument had pierced the skin, the muscles, the cartilage of the fifth rib on the right side; it had cut across the internal mammary artery and a collateral vein, divided the pleura, and reached the anterior border of the right lung. The right cavity of the chest was filled with brown clots, weighing within two or three ounces of two pounds. The internal mammary artery was the only important vessel wounded; there was no other source of the hemorrhage. The two lungs, particularly the left, were gorged with blood; the bronchi were strongly inflated, and contained a red mucus; the heart was almost empty, and contained a small number of clots entangled in the cords of the auriculo-ventricular valves; the venæ cavæ contained but little blood; the brain was pale

The immediate cause of death seems to have been secondary hemorrhage, brought on by the movements of the patient at a time when he was weakened by previous hemorrhage, the effect of the wounds, and the treatment to which he had been subjected. The dark colour of the blood in the cavity of the pleura, probably arose from the mixture of fresh blood with that before poured forth. The wounds appear to have been inflicted with a poignard knife, that is, with an instrument both pointed and cutting on the edge.—*Ibid.*

289.—*Fatal Burn.*—In a quarrel between two workmen in a brewery, one was pushed into a vat full of boiling liquid; he died in forty hours, without any reaction; the surface of the body was one great burn. Signs of pulmonary congestion preceded death. There was no dissection.—*Ibid.*

290.—*Inspection after Death by the Guillotine.*—On examining the neck after the punishment of death, one of the cervical vertebræ was found cut through the middle; the wound showed an unequal retraction of the muscles, without any intermuscular ecchymosis. The heart was empty. Some red clots, and a little frothy blood, were contained in the bronchi. Circumstances prevented a further examination.—*Ibid.*—(*To be continued.*)

VIII.—DIETETICS, HYGIENE, AND MEDICAL POLICE.

291.—*The Sanitary State of the Public Wells of Glasgow.* By ROBERT DUNDAS THOMSON, M.D.—1. *Distinction between River and Well Water.*—The purest water which occurs in a state of nature, is, as is well known, rain water, since in a great measure it resembles distilled water; but even rain water is not perfectly pure, because it may contain traces of substances, soluble in water, which are found in the atmosphere, such as carbonic acid, nitrate of ammonia—the latter only during thunder storms; and besides, both during summer and winter, when there is less diffusion of electricity in the atmosphere, it may contain, dissolved in it, ammonia, which is now known to pervade the atmosphere in the form of carbonate. It is thus obvious that even in the purest forms of waters, as they occur in nature, there is liability to impurity. The rain descending with these substances in solution to the earth, must convey these soluble bodies to the soil. The soil becomes thus, to a certain extent, contaminated by foreign matter from the atmosphere, by the instrumentality of the purest natural water. In taking into consideration, then, the source of the dissolved matters contained in less pure forms of water, it

is necessary to keep in view this constantly operating cause of impurity. To such an extent does this cause produce an influence, that we find in all soils a certain amount of ammonia present, varying in quantity towards the surface, according as the soil is either close bottomed or loose—thus showing that when there is less obstruction to its percolating downwards, it disappears from the surface, and penetrates to the lower strata. A portion at least of this ammonia is conceived to be derived from the atmosphere, and acts as food for plants.

Supposing, then, this water, charged with mere traces of impurity, should fall upon a scanty soil, overlying a hard and difficultly decomposable rock, we should expect that this water would take up but a small amount of soluble matter, in consequence of the absence of any such substances in the soil upon which it fell. Hence it is that streams and rivers which rise among rocks of granite or slate, trap or greenstone, are exceedingly pure. It is thus we account for the superiority of the waters of the Highlands, and other elevated parts of Scotland. The waters of the Dee, for example, which are used for the supply of the city of Aberdeen, are perhaps the purest of any waters employed by an equally large community in this country.

From a knowledge also of the nature of the rocks with which waters come in contact, we can predicate the presence or absence of certain ingredients. For example, we should not expect the presence of potash in the waters derived from the neighbourhood of Glasgow, as the rocks themselves usually contain soda.

If rain water were, instead of falling upon a hard rock, to be precipitated upon a soft and easily decomposable stratum, and filter downwards, we might expect that it would gradually dissolve up a considerable quantity of soluble substances. If, again, the water were to descend upon a sandy or clay soil, having interspersed through its particles saline matter filtering in from various impure sources, it is obvious that the water would be rendered still more impure than in either of the previously supposed circumstances. This is rendered still more obvious in respect to wells, if we remember that the water found in them is originally derived from the atmosphere, and makes its way into wells by filtering through a considerable extent of soft matter, containing of course soluble imbedded substances.

2. *Amount of the Solid Impurities in some of the Glasgow Well Water.*—The following table affords a view of the amount of solid matter (salts, &c.) in the imperial gallon of various Glasgow wells at different seasons, dried at 350 F. :—

	Grains per Imperial Gallon.
Stirling Square Well, June and July 1847,	99·5
Do. February 1848,	94·6
St David's Well, June 1847,	83·3
Bridgegate Well, do.	84·4
George Street Well, do.	57·9
Union Street Well, do.	52·9
St Vincent St. (100) do.	51·57
Glassford Street, do.	40·00
Gorbals (Norfolk St.) do.	44·90
Infirmary Well, do.	25·60
Lady Well, do.	17·73
Arn's Well (Green), do.	14·9
A—February,	50·64
A—March,	43·24
B—February,	64·20
B—March,	49·04
C—February,	58·84
C—March,	66·20
D—February,	71·90
E—Do.	79·89
L—Do.	51·80

From repeated examinations of the same well, I have found very remarkable variations even within a few days.

When we compare the impurity of these waters with that of other waters employed for domestic purposes, the contrast is sufficiently striking :—

	Grains Salts per Imperial Gallon.
Clyde Water, December 1847,	8·4
Brock Burn, mean of four analyses, 1845,	6·95
Gorbals Water Company, 1848.	7·8
Paisley Water Company,	7·59

These comparisons, and the facts which have been stated in reference to the sources of the impurity of well water, are sufficient to show, that well water must always occupy a very unfavourable position when contrasted with rain or river water, in reference to the foreign matter contained in it in solution. In the preceding Tables the wells have been arranged according to the amount of impurity present in them; but they may also be classed according to their position in the city, or to their levels, those in the higher levels being less impure than such as are situated at lower elevations.

It is perhaps not difficult to account for the large amount of solid matter in St David's Well from its proximity to the churchyard, and from the circumstance, if I am not mistaken, that the graveyard at one period protruded further into the street than at present, so as nearly to include the present position of the well.

3. *Table of the Important Acids and Bases contained in some Glasgow Wells, the Mean of Several Trials, and of Different Samples of Water.*

	A.	B.	C.	D.	E.	L.
Sulphuric Acid,	14·79	19·12	11·48	9·00	11·88	11·86
Chlorine,	7·4	8·70	9·54	11·38	10·42	7·04
Nitric Acid,	1·13			3·64	3·48	
Lime,	11·06	11·88	9·30	15·96	5·2	6·72
Carbonate of Lime,	2·9	10·38	14·02	6·4	16·41	6·3

In this Table, the amount of alkali has been omitted, as it is never obtained in analysis by direct experiment, but by calculation, and also the magnesia, as they do not interfere with the value of the water, either as a detergent or as a beverage. The constituents are united together, I conceive, as the following salts:—Sulphate of lime, carbonate of lime, chloride of calcium, nitrates, chloride of magnesium, chloride of sodium, and, probably, alkaline sulphate and phosphate, with some silica and traces of iron, and organic matters.

Hardness of these Well Waters.—What is termed, in common language, the hardness of water, is exhibited by the curd which soap forms when dissolved in it, and is due to the presence of lime in the water. We estimate, then, the hardness of a water by the amount of soap which it wastes. The following Table exhibits the mean degrees of hardness of these wells, that of distilled water being 0 of hardness:

	Degree of Hardness.
Distilled Water,	0·
A—Norfolk-Street, Laurieston,	21·1
B—West Wilson-Street, Glasgow,	19·1
C—Canon-Street, Glasgow,	18·38
D—Cheapside, Anderston,	34·90
E—Orr-Street Calton,	25·62
L—Cochrane-Street, Glasgow,	18.30

When we compare these well waters with the water supplied by the water companies of this city, we can form a more correct notion of the comparative waste which would accompany their employment in washing, that is, in decomposing soap:—

	Degree of Hardness.
Clyde Water, 1844,	4·8
Brock Burn Water, 1845.	3·42

4. *The Source of the Impurity of the Glasgow Wells.*—It has been already stated that the rain water contains traces of ammonia, and sometimes, though rarely, in summer, nitric acid; but, in order even to detect these snbtances, we require to employ a great many gallons of water, but are not able to separate any appreciable weight of these substances, so that if any ammonia or nitric acid should be obtained in well water in such quantity as to be measurable or weighable, it would be an error of reasoning to attribute their origin to the rain water or to the atmosphere. After a good deal of labour, I succeeded in falling upon a process for determining the amount of nitric acid in the well waters.[1] It may be observed that there is no difficulty in detecting the presence of the nitric acid in union with lime in these waters; the difficulty lies in determining the exact quantities. The following table gives the amount of nitric acid, in grains, per imperial gallon, which I have succeeded in separating from the following wells:—

	Nitric Acid, Grains per Imp. Gall.
St David's Well,	2·629
Glassford Street,	1·844
George Street,	0·884
Gorbals, Norfolk Street,	2.574
Infirmary Well,	0·219
A,	1.15
D,	3·64
E,	3·48

These numbers I do not give as absolutely correct, but only as approximations. Imperfect as they are, however, I have stated them because I consider them of great importance, as throwing light on the source of certain impurities in these waters, as bearing upon the general question of sanitary measures adapted for large towns, and as pointing at the enormous waste of valuable fertilizing matter with which the strata under cities are literally saturated. From the large amount of salts contained in these waters, it is obvious that they would be exceedingly valuable for purposes of irrigation.

The question now presents itself—From whence is the nitric acid of city wells derived? If it proceed from the atmosphere, then we ought to detect it in wells situated in country places, since the rain water should distribute it equally over all soils.

But no traces of nitric acid have yet been observed in such wells, although, from the circumstance that rain water does occasionally contain nitric acid, we might expect that some traces might be sometimes detectable in country wells.

[1] The method is a modification of that of Mr Walter Craven.—*See Proc. Phil. Soc. of Glasg.* 1845–46.

Since we cannot account for the derivation of the nitric acid of city wells from the atmosphere, we are compelled to connect its source with the proximity of animals. In other words, the nitric acid of the wells is derived from the excretions of the human beings inhabiting the towns. It is a conclusion to which, without much chemical reasoning, we are shut up; but as the human body contains no nitric acid, we must have recourse to chemistry for an explanation of the mode of its conveyance from the human system to the strata beneath. Animals throw off from their system a portion of their bodies which requires change, in the form of a soluble substance, urea, which when allowed to remain in the air in contact with water, is converted into carbonate of ammonia. Now ammonia, even in the laboratory, if we supply it with oxygen, can be converted readily into nitric acid. And it is upon the oxidation of ammonia that the production in nature of saltpetre and nitrate of soda salts, so important in the manufactures of this city, are supposed to depend. There cannot be in fact a doubt that the ammonia which we so recklessly throw away in our cities, would not only serve as an inexhaustible supply of manures, but likewise for manufacturing purposes, either in the condition of ammonia or nitric acid, into which the ammonia might with facility be converted. With regard to the source of the other constituents in the well waters, it appears sufficiently obvious, that if we can trace one of them to impure sources, the others may also be derived from the same localities. I am therefore of opinion that the contents of our common sewers, and of the outlets for the discharge of the waste fluids of our dwellings, filter in a greater or less degree into the wells of the city; the waters of which, therefore, contain a portion in solution of human excretions.

5. *Influence of the Foreign Substances in Well Water upon Human Health.*—We have various grounds for drawing conclusions with reference to the influence of substances on health. If a substance is not necessary to the human system, its omission from the food is a judicious if not an imperative proceeding. In these wells, sulphate of lime is an abundant constituent, but it is not required by the animal economy; and this form of lime is an objectionable one, upon the ground that it is not very soluble in water. Lime in all forms, when used in excess in the food, is highly objectionable, as it is very frequently the cause of gravel and stone, and enters into the composition of many concretions which gather in the human system. So powerful is its influence, that when a person has been recovering from this painful disorder, a recurrence of the disease in all its violence has been occasioned by the presence of even a small quantity of lime in the water used to drink. It follows, then, that the less the proportion of lime is in water, the better it is fitted for such cases; but although this disease, in its most aggravated form, is fortunately not common, the deposition of minute concretions of lime is far from being a rare occurrence. In country situations in the lowlands, the wells often contain much lime in solution, and the inhabitants do not appear to be liable to gravel; bnt they are placed in totally distinct circumstances from the dwellers in a large and populous city. To appreciate this statement, we have only to recollect that the mean duration of life in the country parts of England and Wales is about 45 years, while in Glasgow it is under 30·0 years. Hence, as city people are much more exposed to the causes of death, their constitutions are not so robust as the inhabitants of the country; and influences which in the country do not apparently exercise any prejudicial effect, may, in the altered circumstances of the town, be highly dangerous. It is certain that calculous diseases are of frequent occurrence in our infirmary; and I am informed by a distinguished surgeon of this city, that many cases come from those parts of Ayrshire where the waters used are impure.

292.—*Use of Horse Flesh for Food.*—The Royal Academy of Medicine of Belgium, have for a long time had under discussion the question, as to whether horse flesh might not be employed as food by the community. The following are the conclusions to which a committee, of which M. Verheyen is reporter, have come.

1st, The sale of flesh from healthy horses may be authorized, without detriment to the public health.

2d, Horses and other animals used as food, which are affected by inflammatory disorders, may be slaughtered for consumption as food, provided they are thoroughly bled in killing them.

3d, Animals affected with dropsy, with advanced phthisis, with rot, measles, hydrophobia, glanders, or skin boils, whether acute or chronic, which have had typhoid fever or pustular disease, poisoned animals, or those which have died by disease or accident, ought to be excluded.

4th, Care must be taken to maintain the sanitary laws now in force, respecting glanders, boils, pustules, and rot, viz., to bury the body with the skin cut to pieces. —*Bulletin de L'Académie Royale de Belgique*, Tom. vi. No. 7.

293.—*Sale of Horse Flesh.*—Since the siege of Copenhagen in 1807, horse flesh has regularly been sold by the butchers in that capital for general consumption. The only formality required is, that a horse before it is killed, should be examined by a veterinary surgeon and marked on each hoof. There exist in the Danish capital shambles specially licensed, where nothing but horse flesh is sold. The establishment is placed under the immediate control of the veterinary college. The researches of Parent Duchatelet, have established that in Paris immense quantities of horse flesh are sold clandestinely. All the efforts of the board of health to authorize and regulate its sale have failed; but there is sufficient evidence to show that no injury to the public health has resulted from it. Baron Larrey used horse flesh with advantage to feed his wounded on various occasions, and by its use got the better of an epidemic scurvy, which attacked the army during the siege of Alexandria. The Belgian committee have eaten horse flesh several times. It must be allowed to be inferior to beef or mutton; it possesses a sweetish taste, which, however, can be easily covered by seasoning. With the addition of a little spice, the difference between horse flesh and other kinds of butcher meat is little observed.—*M. Verheyen's Report.*

294.—*Mortality among the French in Algeria. Cost of a Conquest.*—M. BOUDIN, surgeon in chief of the army in Africa, lately read to the National Academy of Medicine a commnnication on the acclimatizing of the French population in Algeria.

Since 1830, Algeria has absorbed more than fourteen hundred millions of francs, and has caused the death of more than a million of soldiers. Its budget at present exceeds 120 millions of francs. Its army, with an effective strength of 100,000 men, sustains from the climate alone an annual mortality of 7000 fighting men. It demands each year one son additional to be born in 20,000 families. The increasing importation of bread stuffs and cattle attest the insufficiency of the soil for the mere support of the army. The grain grown in the colony fetches a price nearly double of that imported from Odessa. After eighteen years of unequalled efforts, Algeria does not possess more than ten thousand cultivators. Every where, up to this moment, the Arab races show themselves refractory to civilisation and amalgamation with the French. In short, these immense sacrifices of life and capital have only terminated in a negative colonization, whilst they have produced a positive diminution of the resources of the mother country.

The following are among the new facts collected by M. Boudin in support of these propositions. In examining the annual mortality of the civil population of France, where the number of old persons is of course considerable, he finds it to be a little less than 24 per 1000 inhabitants. In Algeria the mortality per 1000 at the various stations is reckoned as follows:—

Algiers, 36·4; Mortaganem, 37·0; Bonfarick, 40·4; Oran, 41·5; Tenes, 49·6; Borkadem, 50·7; Phillipville, 55·3; Kouta, 57·6; Cherchel, 60·9; Mustapha, 62·1; Fondonk, 65·9; Budak, 66·2; lastly, at El-Arouch, 141·4. [The mean mortality for the whole colony is thus 58·8 per 1000.]

The facts collected in this memoir may be summed up as follows:—Outlay of 1500 millions of francs; upwards of 100,000 men killed by the climate; annual budget of more than 100 millions of francs; colonization *nil*; Arabs refractory to amalgamation and civilisation; the working year reduced by disease to less than eleven months; mortality of the soldier eight times greater than that of men of the same age in civil life in France; mortality of the European civil population double that of the population living in France; the proportion of deaths of Europeans increasing with the prolongation of the occupancy of the country.—*Gazette Médicale.*

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

VOL. I. AUGUST, 1848. No. VII.

I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

295.—*On the Mucous Membrane of the Vagina.* By Dr C. MANDT.—The author was induced to make the minute researches communicated in the present paper, by the Memoir of Deville (*Archives Générales*, 4th series, vol. v.) on the granular inflammation of the vagina in pregnancy, in which he considers the granulations as the hypertrophied follicles of the vaginal mucous membrane.

The mucous membrane of the vagina is covered by a thick pavement epithelium, and is characterised by numerous microscopic papillæ, furnished abundantly with nerves. These are quite different from the wart-like bodies described by the older writers as papillæ, and which are visible by the naked eye on the transverse wrinkles of the mucous membrane. The microscopic papillæ are scattered over the mucous membrane generally, and exist in great numbers on the surface of the wrinkles and wart-like papillæ of the older anatomists. They bear a general resemblance to the papillæ of the skin and tongue, but are much smaller and closer.

The opinions of authors as to the glands of the vagina are very discordant. Some describe follicles of considerable size, such as those at the opening of the urethra and on the cervix uteri. Others speak of both simple and conglomerate glands as being abundantly distributed in the vaginal mucous membrane; while others have failed to see any thing approaching to a glandular structure.

The author has not been able to observe in the vagina any general distribution of glands or follicles, and thinks that the descriptions of former authors have been drawn from the glands about the cervix uteri, and the parts anterior to the hymen. He has, however, in one or two instances, found an appearance similar to what was described by Haller as occurring on the upper and smooth part of the vaginal mucous membrane. This was a limited number of bluish or blackish points, sometimes very slightly depressed, but scarcely so as to affect the smoothness of the membrane. They seemed only in a few instances to have an obscure and indefinite opening, although Haller describes them as having openings into which a bristle might be introduced. The author is not certain that they are glands at all; but thinks they may probably be vesicles generally closed, and only accidentally presenting openings.

The author is disposed to consider the granular inflammation of the vagina, as rather a hypertrophy of its papillæ than of its glands.—*Henle and Pfeufer's Zeitschrift*, Band vii. Heft. i.

296.—*On the Investing Fibrous Membrane or Fascia of the Heart.* By ROBERT LEE, M.D.—In prosecuting his dissections of the nerves of the heart, the author found that the great difficulty in displaying them arose from the presence of a dense fibrous membrane or fascia, interposed between the serous membrane and the muscular substance. He gave a brief description of this fibrous membrane in a paper "on the nervous system of the heart," read before the Royal Society on the 20th of May 1847. In the present communication he enters more fully into the mode of displaying this fibrous investment of the heart; describes its appearance and structure, its relative thickness and firmness of attachment in different parts, and the strong though slender fibres which pass from its inner surface, and form a *stroma*, binding together the bloodvessels and nerves, and accompanying them between the muscular fasciculi throughout the entire walls of the heart, from the outer surface to the lining membrane. The author exhibited drawings and preparations, demonstrating the existence of this fascia in the hearts

of the larger quadrupeds, and in the hearts of children of the ages of six and nine years, as well as of the adult. He states that it is found, also, in the hearts of birds. He remarks, that it is this fascia which gives to the heart the great firmness noticed by Mr Hunter; and that it must have great influence in preventing dilatation and rupture of the organ during violent exertion. He thinks it not of less interest in a pathological point of view, since it is impossible to avoid suspecting that rheumatic inflammation of the heart has its principal and primary seat in this dense fibrous membrane; and he suggests that dilatation of the heart may be owing to a change in this membrane analogous to that which, in the sclerotic coat of the eye, gives rise to staphyloma and other diseases of that organ.—*Proceedings of Medico-Chirurgical Society of London, in Med. Gazette,* June 23, 1848.

297.—*On the State of the Blood and Muscles in Animals killed by Hunting and by Fighting.* By Mr GEORGE GULLIVER.—The author states that his experience is opposed to the doctrine affirmed by Hunter (and generally received at the present day), that in animals hunted to death the blood remains fluid, and the muscles uncontracted. In two instances, in hares hunted to death by harriers, he found the rigor mortis to supervene shortly after death; the heart was contracted, and contained clots of blood. In a hunted stag, he likewise found the blood to coagulate after death; and observant stag-hunters have assured him, that the muscles become rigid under those circumstances. The same was observed in cocks killed by fighting.—*Ibid.*

298.—*Composition of Human Milk.* By J. W. GRIFFITH, M.D.—This paper contains the result of a series of ultimate analyses of human milk, made by drying the fresh milk at 212°, burning with chromate of lead, and determining the nitrogen by Warrentrap and Will's method. As an illustration of these results, we give the following of milk, taken fourteen days after parturition. It yielded 12·49 and 12·58 per cent. of solids in two determinations, and the ultimate analyses gave—

	I.	II.
Carbon, .	50·57	...
Hydrogen, .	7·86	...
Nitrogen, .	1·90	1·92
Oxygen, .	38·12	...
Ash, .	1·55	...

From his analyses, the author draws the conclusion, that the milk is rather richer in carbon and hydrogen during the earlier periods of lactation, while the quantity of nitrogen undergoes very little variation. This latter statement is at variance with the results obtained by Simon, from the proximate analysis of the milk at different periods; he found the caseine increased towards the end of lactation, but the method of analysis adopted by him is probably not free from fallacy. The amount of caseine obtained by proximate analysis, varies considerably according to the method of analysis made use of. When the butter is removed by ether, and the sugar and extractives by water, the proportion of caseine found is considerably less, than when the sugar, &c., are removed by alcohol. The author has found that the former method gives results much more consistent with the ultimate analysis than the latter.—*Chemical Gazette,* No. 134.

299.—*On the Chemical Phenomena manifested by different Substances introduced into the Organism.* By M. BERNARD. (Continued from p. 132).

Second Series.—The author next proceeded to determine if the blood presented any obstacle to the establishment of certain catalytic reactions, which take place with facility external to the organism. The action of emulsine on amygdaline is favourable for this purpose, in as much as a highly poisonous substance is instantly generated by their union. The experiments of M. Bernard satisfactorily determine, that the injection of these substances into the circulation, simultaneously, or at a short interval, causes death, with the usual symptoms of poisoning by prussic acid, and with the evolution of a strong smell in the breath of oil of bitter almonds. The injection of either of the substances separately, on the contrary, gave rise to no fatal results.

The action of diastase on starch in the blood might naturally be expected to be a good subject of experiment. But the serum of the blood has the singular property of producing the transformation of starch into sugar; hence experiments on this head were not instituted.

The transformation of sugar into alcohol, by means of yeast, was the next subject of experiment. In two animals (a dog and a rabbit), cane sugar and yeast were simultaneously introduced into the circulation in considerable quantity. Both animals died. The urine of the rabbit alone was examined; it remained quite free of sugar (which, under ordinary circumstances, passes with great ease into the urine). The symptoms in both animals were those of a marked typhoid con-

dition, with fever and extreme debility; the rabbit died in less than twenty-four hours, the dog on the third day. The morbid changes were, in both animals, injection, ecchymosis, ulceration of the stomach, ecchymotic patches in the small intestine, and a dark imperfectly coagulated state of the blood. In both cases (a sufficiently singular fact) the pancreas was diseased, the orifice of its ducts being tumid and red; its substance in the rabbit red and inflamed; in the dog, the seat of numerous small abscesses. These facts appear to indicate a special poisonous action, exercised by the alcoholic fermentation upon the animal organization; and also to prove that the change of sugar into alcohol may occur within the circulation.

Third Series.—The rapidly fatal effect of cyanuret of mercury, when introduced into the stomach, is readily explained by the action of the gastric juice, which, even externally to the body, decomposes it, setting free hydro-cyanic acid. The action of this salt, when introduced into the veins, on the contrary, cannot be explained by the action of the blood upon it; as, out of the body, no decomposition takes place. Nevertheless, on injecting the cyanuret of potassium into the veins of an animal, a poisonous effect, similar to that of prussic acid, is produced; and the odour of prussic acid is exhaled from all the tissues.

Where, then, does this decomposition take place? As all the acid fluids of the body present a reaction similar to the gastric juice, M. Bernard performed the following experiment, to exclude the possibility of the decomposition taking place in the stomach or urinary passages. The stomach, kidneys, and bladder, were removed from a live dog. A solution of cyanuret of mercury was then injected by the crural vein; in half a minute the animal began to respire with difficulty, and died soon after convulsed. All the tissues were impregnated with the odour of prussic acid; yet in no place could an acid fluid be found. [Were the contents of the cœcum examined? It appears to us that their well-known acidity forms an objection to this experiment.]

With the view of discovering whether this reaction took place in the systemic capillaries, the author now isolated the thigh of a dog from all communication with the rest of the body, leaving only the artery and vein entire. He then injected by the artery a sufficient quantity of cyanuret of mercury, and shortly afterwards drew blood from the vein. The blood contained abundance of the salt, but no trace of prussic acid; the tissues of the thigh were in a similar condition. From this experiment M. Bernard judges that the systemic circulation is not engaged in the decomposition of the cyanurets; he therefore, by way of exclusion, ascribes this decomposition to the pulmonic circulation.

Certain bicarbonates are decomposed in the blood when passing the capillaries of the lung. Thus, if a large quantity of solution of bicarbonate of soda be injected into the veins of a rabbit, the animal dies suddenly, and, on dissection, there is found air in the division of the pulmonary artery, and sometimes even in the ventricles of the heart. The lungs also are emphysematous and distended. These results are not produced if the same salts are introduced gradually.

Fourth Series.—The experiments of this series are not so important as to require detailed notice; they consisted simply of an examination into the effects of different animal fluids, on the state of oxidation of the ferro-cyanurets of potassium, and the salts of iron.—*Archives Générales de Médicine*, Jan. and Feb. 1848.

300.—*On the Changes which certain Substances undergo in their Passage into the Urine.* By MM. Wöhler and Frerichs.—These experiments were made by administering either with the food or by injection into the stomach of animals, generally dogs, the substances, the action of which was to be observed. The animals were then introduced into a case lined with tin, the bottom of which was so constructed as to carry off and collect the whole of the urine. The following are the results obtained, with the different substances:—*Salicylous acid.* This substance, which is isomeric with benzoic acid, was given repeatedly, and in large doses. It irritates the mucous membranes, but is not poisonous. Hippuric acid was never found in the urine, but the salicylous acid passed off unchanged, and was recognised in the urine by its characteristic tests. Salicylic acid was sought for but not found, which is of interest, because, as we shall immediately see, oil of bitter almonds, which is in many respects allied to salicylous acid, undergoes oxidation in similar circumstances.—*Oil of bitter almonds free from hydrocyanic acid*, in doses of 30 grains, had no poisonous action upon dogs. A large quantity of hippuric acid was found in the urine. The oil of bitter almonds is consequently oxidized in the system, and the benzoic acid produced is further changed into hippuric acid in the usual manner.

—*Amygdaline* in two cases produced vomiting, paralysis of the extremities, and slow and stertorous breathing, which symptoms went off after 6 or 8 hours. The breath smelt distinctly of hydrocyanic acid; and the urine, on the addition of emulsion of sweet almonds, gave the same smell in an equally distinct manner. Hippuric acid was not found. In all the other cases in which amygdaline was tried, no such symptoms made their appearance, although the doses were equally large.—*Benzoic Ether, and Balsam of Peru*, gave rise to the formation of hippuric acid.—*Tannic Acid* was administered in doses gradually increased from 7½ to 90 grains. The animal remained healthy, although the intestinal evacuations ceased entirely. In the urine were found *gallic acid*, pyrogallic acid, and humus-like matters.—*Urates and Allantoine.* These substances were tried with the object of ascertaining whether the view which has been often adopted, that uric acid undergoes decomposition in the system exactly as it does out of it, was correct. As is well known, under the action of oxidizing agents, it passes into urea, oxalic acid, and allantoine. The administration of urate of ammonia to a rabbit, was found to cause the separation by the kidneys of at least five times the usual quantity of urea. In the dog, and in man, it was found to cause the excretion of a large quantity of oxalates, but no allantoine could be detected. In order, therefore, to ascertain what became of the allantoine, it was administered in the pure state. None of it appeared in the urine; nor was oxalic acid found, which was sought for under the impression that the allantoine might have been changed into oxalic acid and ammonia, as happens when it is boiled with caustic potass.—*Sulphocyanide of Potassium* passes unchanged through the system, and is not poisonous.—*Thiosinamine* (*Rodallin*, product of the action of ammonia upon oil of mustard) is not poisonous. Sulphocyanide of potassium was found in the urine. Now it has been shown by the researches of Gerhardt and Von Wertheim, that oil of mustard can be decomposed into sulphocyanide of potassium and oil of garlic. A similar change, therefore, appears to take place in the system; but no traces of the allyl compounds could be observed by the sense of smell either in the breath or urine.—*Chinone and Aniline* are not poisonous.—*Hydrate of Phenyle* (*Carbolic acid*) proved highly poisonous—a few drops causing the death of rabbits, guinea pigs, and dogs, in, at furthest, a quarter of an hour, with violent convulsions. As the hydrate of phenyle has been found in castoreum, the authors suggest its use in small doses in hysteria. A few trials made with it were, however, insufficient to test its value. —*Alloxantine*, in doses of from 75 to 90 grains, did not re-appear in the urine. No alloxan was found, but the urine was rich in urea.—*Urea*, administered to a man in a dose of 45 grains, was not converted into carbonate of ammonia, as the authors had *a priori* expected, but appears to have passed off unchanged.—*Phosphorous and Arsenic Acids.* It results from the experiments of the authors, that arsenic acid is much less poisonous than arsenious acid. The action of the former substance is not so local as that of the latter, and is longer in taking effect, its action being probably dependent upon partial reduction to the state of arsenious acid. Phosphorous acid in moderate doses proved poisonous to a pigeon, guinea pig, and cat, but without any appearance of inflammation of the intestinal canal. The authors draw attention to the fact of the lower grades of oxidation of the isomorphous elements, arsenic and phosphorus being poisonous, while the higher, in the case of phosphorus, is quite innocuous, and in arsenic is a comparatively feeble poison.—*Arseniate of Lime*, which occurs in some mineral waters, was found to be poisonous in large doses.—*Annalen der Chemie und Pharmacie*, March 1848.

II.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

301.—*On the Anatomy of the Enlarged Thyroid Gland in Bronchocele.* By PROFESSOR ALEX. ECKER, of Basle.—The author distinguishes two varieties of goitre or bronchocele, which are sufficiently distinct in some cases, although frequently combined so as to give rise to secondary forms. In one of these (Gefässkropf, *Struma vasculosa*) the vessels are chiefly engaged; while the other (Drüsenkropf, *Struma glandulosa*) consists essentially in alterations of the closed vesicles, described in last Number of the *Retrospect* (p. 129) as composed of the basement membrane, and containing the secreting cells of the gland.

In the first kind, or *vascular goitre*, there is in the early stage a congestive turgescence of the gland, a condition often merely temporary, but liable to become

permanent when accompanied by exudation, or by some other alteration as presently to be described. The temporary congestion here spoken of may be produced by respiratory embarrassment, and seems also in females to be connected with excitement of the generative system. The congestion, when becoming permanent, attacks the gland unequally. The lobes which are most diseased are enlarged to different sizes, and those which are most considerably enlarged, generally present increased development of the surrounding areolar tissue, which forms a distinct investment supplied with vessels. The smallest lobes which he has seen thus surrounded, were not more than a line in diameter. On looking at one of these isolated lobes (the size of a cherry) with the microscope, he found on one occasion, that the whole of the changes were in the vascular system, the capillaries of which, running in the interior between the glandular vesicles, were enlarged and full of blood; the vesicles themselves were apparently healthy, and contained their normal contents. In the further progress of the disorder there is more and more dilatation of the capillary vessels and smaller arteries, which become varicose and aneurysmatic, as described by Hasse and Kölliker (*Zeitschrift f. Rat. Med.* B. IV. p. i.) The alteration generally begins at the centre of the lobule. With a simple lens, or even the naked eye, there are to be seen very distinctly marked blood-coloured points; these are the dilated parts of vessels, filled with blood. The diameter of the dilated parts is from 1-10th to 1-8th of a millimetre; while that of the normal portions of the same vessel is about 1-30th of a millimetre—the smallest capillaries not being the most subject to these changes. At times the dilated portions may be observed to break off from the rest of the vessel, presenting the appearance of a cyst filled with blood, and resembling a bloodvessel in nothing except the contents. The walls of these cysts are of very various thickness; they are sometimes evidently denser than natural, and the seat of an opaque deposit. The cysts are not readily compressed. In their interior, among the bloodvessels, are to be seen colourless spaces, which, on rupturing the cyst, may be observed to be caused by the presence of pale, circular, granular bodies of 1-8th of a millimetre in diameter (altered colourless blood-corpuscles). The yellow blood corpuscles adhere to each other, and are with difficulty separated by the addition of water. The gland-vesicles have generally disappeared at this stage of the disorder. Professor Ecker seems undetermined whether to consider this an inflammatory affection of the gland. In the cases he has seen, the symptoms have not presented this character.

The ultimate consequences of the changes described above are hemorrhage, exudation, and calcareous deposition in the walls of the dilated vessels. When blood is extravasated, it usually infiltrates itself through the parenchyma, and afterwards becomes surrounded by a sort of cyst, as in apoplectic extravasations in the brain. These changes constitute one form of *Struma cystica*. The blood likewise undergoes changes similar to those common in apoplectic cysts—the blood corpuscles disappearing, and being replaced by exudation corpuscles and granular masses, with masses and bodies of a rust-yellow colour, and sometimes crystals of cholesterine. Exudation is very frequent, and takes either a diffused form, or is collected in masses surrounded by congested tissue. The component parts of the exudations are generally primitive fibres and elementary granules, with blood-corpuscles. Most frequently exudation occurs in a distinct and isolated form in a cleft or cavity of the gland, which is larger or smaller in proportion to the amount of exudation. In some cases the author has seen the pathological products surrounded by a distinct cyst, lined by a membrane; this constitutes another form of the *Struma cystica*. The cysts so formed may either enlarge indefinitely, or may become atrophied. In addition to these transformations, the author entertains no doubt of the occasional occurrence of fibrous and carcinomatous growths as the result of exudation in the thyroid gland: but by far the most common product is a development within the exudation of new vesicles or cysts, similar to those of the normal gland, but inferior both in size and in the degree of development of their contents. These *pathological* vesicles the author regards as *exogenous* formations, springing up among the vessels and normal elements of the gland, and constituting, according to his pathological views, the only real hypertrophy of the gland. A very frequent alteration of the vessels in the *Struma vasculosa*, according to M. Ecker, is the obstruction and obliteration of the smaller arteries and capillaries, by the deposition of calcareous matter within their coats. This change appears to take place chiefly in vessels under 1-12th of a millimetre in diameter; those larger than this remaining unaffected. The altered vessels are destitute of blood, while at the same time they often appear

in parts dilated and sacculated in form; the walls of the sacculi being, like those of the vessels themselves, the seat of calcareous deposit. From an examination of glands affected with this degeneration, M. Ecker concludes that it is a secondary result of the congestive state formerly noticed. The obliteration of vessels is thus one of the sources of the calcareous concretions often found in bronchocele; although, according to the author, concretions are also frequently formed by the obliteration of cysts and by the absorption of exudation.

The second primitive form of goitre is that in which the gland-vesicles are dilated by albuminous fluid, or by gelatinous masses of so-called *colloid* matter. The vascular system is either not involved or only secondarily affected; in the latter case, a composite form of goitre is the result.

In the commencement of this alteration the small granules or lobules of the gland, instead of having the solid appearance of those in a healthy gland, are at some parts turgid and partially diaphanous, like the grains of boiled sago. The diseased lobules also become aggregated together, and can often be readily separated in a mass from the more healthy tissue around them. The fibrous tissue disappears more and more as the disease advances, and the vessels become obliterated; and at last a whole lobe of the gland may present the appearance of a gelatinous yellowish mass, held together by very delicate fibres; or it may entirely become converted into one great colloid cyst, constituting a third form of *Struma cystica*.

The microscopic examination in the early stage, shows the vesicles somewhat dilated, and filled with contents which present more than the usual amount of fatty granules. The dilated vesicles may reach the diameter of 1-6th, 1-4th, or even half a line. When larger vesicles than this are seen, they are commonly due to the coalition of several smaller ones, by the disappearance of the intervening membrane, and union of the colloid masses. The principal change at first on the contents of the glandular vesicles is the generation of an unusually large amount of complete cells, fewer of the nuclei being free than in the healthy gland. These cells appear frequently to become distended with colloid matter, the nucleus, at the same time, shrinking, and the cell-wall becoming very thin, till at last the cell assumes the appearance of a rounded mass of jelly. There are also to be seen more irregular masses of colloid matter quite transparent, and containing numerous cells and nuclei, and sometimes crystals of cholesterine. The final result of all these changes is the disappearance of the cell structure, and the absorption of the walls of the vesicles, as well as the fibrous stroma, until at last the gland becomes transformed into transparent colloid masses, in which few septa and no bloodvessels are to be seen.

The colloid matter appears to contain much albumen, giving the characteristic lilac colour on boiling in muriatic acid. It is insoluble in hot and cold water, and therefore bears no resemblance to the gelatinous principles.

The alterations in this form of degeneration of the thyroid gland are, in the majority of cases, quite unaccompanied by congestion. The author, therefore, regards the colloid matter as not being an exudation in the proper sense of the term, but an excess of vitiated secretion, which, through inactivity of the absorbents, is not removed back into the circulation. Hence, he considers the name *Struma lymphatica* (sometimes applied to goitre) as by no means ill chosen.

It remains only to say, that the two primitive forms of goitre here described are frequently combined, so as to produce all sorts of intermediate and complex varieties. Thus, the congestion and dilatation of the vessels may supervene on the glandular form, and occupy the intervening parts of the gland between the vesicles; and dilatation of the vesicles may supervene on changes more immediately connected with the vascular system. In either case the result is similar, and it is, therefore, impossible to find a sharp and definite boundary-line between the two primitive forms.—*Zeitschrift für Rationelle Medizin*, 1847, Heft 2.

[The above appears to us a most important contribution to the pathological anatomy, not only of this organ, but also of the glandular system in general. The author's views are entitled to great consideration, from the circumstance of their being based on an intimate knowledge of the anatomy of the healthy gland, the only sure basis, in our opinion, for an inquiry into its pathological conditions. Nevertheless, there are some points on which we would desire corroborative evidence before assenting to his views; such are the exogenous and new development of gland-vesicles in exudation, and the formation of cysts from the dilated arteries, phenomena which appear so different from what we know in other glands, as to require the strictest scrutiny, more especially where there are so many sources of fallacy. We would direct the

attention of the reader to the last form mentioned of the cystic goitre (*Struma cystica*), as presenting many remarkable analogies with the pathological formation of encysted dropsy of the ovary, described by Hughes Bennett.]

302.—*Ossification of the Cartilages of the Larynx.* By M. Segond. (Académie de Médecine.)—The author's conclusions are as follows:—1st, The epoch of life at which ossification of the laryngeal cartilages commences is variable. 2d, When this change takes place, it commences constantly at particular points, which for the most part correspond to the insertion of the laryngeal muscles. 3d, Ossification commences in the cricoid cartilages, and terminates with the arytænoid. 4th, When the cricoid cartilage is entirely ossified, its form becomes altered, so that the anterior part of the cartilage cannot move under the thyroid cartilage; whence it happens, that persons in whom the change has occurred, cannot utter the high notes of the voice. 5th, The thyroid cartilage when ossified undergoes a notable transformation; the groove which is commonly seen in front of the superior tubercle is obliterated, and the inferior border of the cartilage is thickened, and interferes with the motions of the cricoid. 6th, There is a change, independent of ossification, which may embarrass the movements of the cricoid cartilage, viz., a prolongation of the inferior cornua of the thyroid. 7th, Two portions of the arytænoid cartilages resist the progress of ossification for a long period; these are the superior internal apophyses. The *corpora triticia*, when ossified, become amalgamated with the great cornua of the thyroid cartilage.—*Archives Générales*, Nov. 1847; and *Ranking's Abstract*, Jan. to June 1848.

303.—*On the Prevalence of Small-Pox in India at Different Periods of the Year.* By C. Morehead, M.D.—The examination of the statistics of a considerable number of cases shows that the amount and fatality of small-pox in India is many times greater during the first half of the year than during the second. Thus the admissions into the Bombay General Hospital are six times as many from January to June as from July to December; and in Calcutta the deaths from small-pox are forty times as numerous in the former as in the latter period. The maximum both of deaths and admissions is in the month of March, corresponding with the observations of Sydenham and Huxham respecting the prevalence of small-pox epidemics in this country about the vernal equinox. It is observed in India, that a considerable difficulty exists of propagating the cow-pox during the hot months of the year.—*Bombay Medical and Physical Transactions*, No. VIII.; *and Brit. and Foreign Med. Chir. Review*, July 1848.

304.—*Revaccinations in the Prussian Army.*—The total number of men vaccinated was 43,264; the number of those who bore marks of a former vaccination in a decided manner, 34,264; ditto with the marks not very distinct, 6405; ditto with the marks not visible at all, 2927. The vaccine virus developed itself satisfactorily in 25,544; very irregularly in 7425; and not at all in 10,627. The vaccinations which had yielded no results were repeated; they acted in 2718, and failed entirely in 8952 cases. In consequence of the present vaccination, there were developed from one to five vaccine pustules upon 13,295; from six to ten upon 8164; from eleven to twenty upon 5767; from twenty-one to thirty upon 1036 of the men. Amongst those who were vaccinated in the year 1847 there was, within the same year, no case of varicella, none of actual small-pox, and one only of chicken-pox. The lymph was obtained from vaccinated children or grown-up persons. It is remarkable, that amongst those who were subjected to revaccination, there were several who had had the small-pox before, yet upon whom the vaccine matter produced the usual pustules.—*Medical Times*, July 1, 1848, (authority not quoted).

III.—PRACTICE OF MEDICINE.

305.—*Practical Remarks on Croup.* By Dr H. Zeroni.—The most ordinary form of croup is *Congestive Croup*. This form generally occurs at a time when there is a tendency in the weather to induce catarrhal affections, manifesting itself suddenly, generally in the night, and without any precursory symptoms, with the exception, perhaps, occasionally of a slight cold in the head. In this form of the disease, children wake from a quiet sleep with a sharply barking kind of interrupted cough, raise themselves in bed, and begin to cry in apparent distress, a piping hiss-

ing inspiration being occasionally heard as well as in their coughing. The countenance is often flushed and turgescent, but the respiration is not hurried, and but little febrile excitement is perceived in the pulse. When the attack subsides, the child again falls asleep, and rests quietly till the morning; occasionally, however, the attack recurs, respiration becomes more noisy, rattling, and hissing, and the child either vomits, or simply makes an effort to do so. This form of the disease requires little more than careful nursing for its cure; the child should be kept in bed, be made to drink copiously of warm drinks, partake freely of some oily emulsion, and have a sponge steeped in hot water laid on the neck. If, however, a hissing hurried respiration causes apprehension of a recurrence of the attack, the most effectual means is to give an emetic, continuing its use until the child has vomited several times. (This form of the disease appears to be induced by an hereditary and acquired predisposition.) To young children during the first year, Dr Zeroni gives ¼ gr. cupr. sulph. every quarter of an hour.

The second form is *Inflammatory Laryngeal Croup*. This is far more serious in its nature, and *never* occurs without premonitory symptoms, or where it may not be referred to the action of some injurious influences. It may have been induced by the pre-occurrence of the milder form, or owing to exposure to bad weather immediately after recovery from a former attack. The characteristic symptoms of this second form of croup are as follows: broken, rough, whistling cough, the inspiration quick, and with a sharp sound; the child is restless, moves the hands, bringing them frequently to the head and neck. The face is hot, red, or purple, the neck swollen, whilst the pulsations of the heart and arteries are rapid. When the attack subsides, the child becomes strikingly animated, enters into his customary sports, and evinces no desire to lie down or to go to sleep. Respiration after the first attack, and even after several attacks, is quiet and natural; it becomes, however, gradually more hurried and noisy, and a faint rattling is heard, which assumes by degrees a metallic sound. Hoarseness increases, and the voice becomes low and whistling. The attacks come on more frequently, and the child is more restless and irritable during the periods of intermission, whilst the pulse grows fainter and fainter. This uneasiness, however, ceases. The child doses continually, lies on its back, with its head thrown back and pressed into the pillow; the throat protrudes, the countenance is drawn, pale, and swollen, somewhat of a bluish or yellowish tinge. The eyes are sunk, and half shut; whatever is handed to the child is impatiently pushed aside, and nothing can induce it to drink. The respiration is loud and rattling, all the muscles of the neck act convulsively, the pulse is frequent and small. The child dies either in this state of sopor, with the symptoms of paralysis, or in the midst of convulsions induced by another choking attack of cough.

This form of disease requires prompt and energetic treatment. No time should be lost in abstracting blood, and no apparent amelioration of the symptoms should hinder the frequent application of leeches, in proportion to the age, until the child begins to evince an appearance of exhaustion from loss of blood. A second important means is cupr. sulph., from 3 to 4 grains of which should at first be given in order to induce vomiting, and the dose should be then reduced to ⅛ or ¼ of a grain, every half hour or hour, until the disease assumes a favourable turn. Dr Zeroni also speaks of the invaluable aid he has derived in some cases of *this* form of croup, but not in any other, from a combination of musk and opium.

Inflammatory Tracheal Croup.—This is likewise attended by premonitory symptoms, and induced by pre-existing or extremely injurious influences. It generally occurs in the months of February and March. Children catch cold, have a dry, somewhat rough, cough, which is often disregarded, and they are frequently suffered to expose themselves to cold and damp; the hoarseness and cough gradually increase, this state often continuing for upwards of a week before the occurrence of the fit of choking, and before medical advice is sought. After the first attack, the child is often cheerful, and even at times extremely merry. The voice is quite gone, the respiration somewhat hurried, and more or less rattling; the cough not frequent, short, rough, unattended by a whistling inspiration, no expectoration, or if any, merely a white frothy mucus, interspersed with a few streaks of blood; the pulse quick, the skin warm, and the urine natural. If the little patients are able to speak, they complain of pain in the neck and the middle of the chest. By degrees the choking fits become more frequent, the respiration more hurried and difficult, and the tone accompanying it rougher and more croaking. Extreme hilarity and the most remarkable movements alternate with excessive lassitude, during which the child

sinks down exhausted, falls asleep, exhibiting the most marked disinclination to be spoken to or touched. The cough becomes a noiseless suppressed expulsion of air, the attacks are accompanied by a violent noisy rattling sound, the muscles of the neck become powerfully convulsed, and the head is thrown far back. The pulse is small and quick, the skin drawn, the muscles extremely relapsed, the face swelled and puffy, the lips blue. The child dies in a state of sopor, as if from asphyxia. This form is more fatal to children under two years of age, than to those who are older. It is met with in children of six, or even occasionally nine years of age.

The application of leeches is of the greatest importance, since on this depends the result of the whole treatment. If a sufficient number of leeches be early applied to the neck and chest, we may regard the termination of the disease as probably favourable. Emetics do not appear to have much influence here, although they occasionally relieve the respiration.

The fourth form, which is designated by Dr Zeroni as *Aphthous Croup*, is the most dangerous, but fortunately also the most uncommon; it has only been observed in autumn, during a continuance of stormy, cold, and rainy weather. It never occurs unattended by premonitory symptoms. The child is somewhat excited, occasionally flushed, and appearing from time to time to have transient febrile symptoms. As, however, it is cheerful, sleeps well, and has a good appetite, these symptoms are too often neglected, and the child is suffered to go out in the damp or cold, until at last it complains of pain on swallowing. On examining the throat, the tonsils are found to be somewhat swollen, reddish, and covered here and there by a yellowish-white puriform investment. The submaxillary glands are swollen. The child continues, however, cheerful, and there is scarcely a trace of fever. The aphthous streaks or points now extend gradually more and more, approaching each other. On removing part of this investment from the tonsils, we find that the subjacent membrane is of a brownish-red colour, but not dry. Deglutition becomes more painful, but still there is no fever, and it is not till the fourth or fifth day that the symptoms assume a more serious character. Hoarseness comes on, a low singular kind of cough is heard, and occasional oppressive sensations are experienced. The disease soon runs its fatal course, and the child, after several days of indescribable suffering, dies in a state of sopor, under circumstances similar to those of which we have already spoken. A prophylactic mode of treatment seems the only one that is of avail in this form of croup; and, considering the nature of the disease, too much stress cannot be laid on those means of prevention under the control of parents —such as prompt attention to any symptoms of indisposition manifested by young children, and care not to expose them to the open air until all morbid symptoms are entirely removed; since Dr Zeroni mentions that where once this aphthous affection of the tonsils was established, he never yet succeeded in saving the child; leeches, tartar-emetic, and calomel being all without avail. The only means which he considers at all likely to produce a favourable result, are the external application of caustics, as suggested by Aretæus. Dr Zeroni considers that this aphthous affection of the tonsils may occur in adults, although in their case he has never observed a fatal result. The disease may manifest itself alone, or conjointly with febrile diseases; but he has not found that, in this latter case, the local affection rendered any change necessary in the mode of treatment for the main disease.

The fifth form of croup, observed by Dr Zeroni, is *Suppurative Croup*. This is invariably found to have been preceded by a fully developed catarrh, and usually occurs at the close of winter, and the beginning of spring. It begins with more or less fever, restlessness, insomnia; the cough that was previously loose, becomes dry, rough, and barking, without being attended by a whistling inspiration, or a metallic sound. The cough comes on by fits, during which the child tries to sit up, bends the head forward, and puts its hands to its ears, tongue, or mouth. The attacks are not attended by choking, but cause distress by the continuance of the short broken cough. The child is hoarse from the beginning of the disease, but loses his voice entirely after a time; cases, however, occur, in which the cough is at first loose, and the voice clear, but where there is much fever at the beginning of the disease, and even strongly marked delirium occurring at night. Fever gradually increases, the child sleeps almost continually, actual suffocative fits at length come on, the respiration becomes hurried, gasping, and rattling. The child is pale, and appears swollen; and finally torpor supervenes, with an extremely quick pulse and profuse perspiration,

and the child not unfrequently dies in convulsions.

If the disease is neglected, it generally proves fatal to infants and very young children from the ninth to the eleventh day. In adults, it may be prolonged to the fourteenth or eighteenth day; in the latter case, the attacks are much more violent. The suffocative attacks which generally supervene on the seventh day are most distressing; the child starts up with violence, tears, scratches, and bites every thing it can lay hold of, often tearing its hair and biting its hands; it appears to be in most fearful struggle, and in the height of its agony, the hoarseness suddenly disappears, and it cries in a loud voice for help: the short cough becomes looser, and mucus is expectorated, the fever abates, and finally the dreadful sufferings of the little patient terminate in symptoms of paralysis.

This form, like the others, demands a prompt and early application of leeches, which must be repeated with a frequency proportionate to the age of the child and the violence of the fever; it is almost the only thing to which recourse can be had, but as soon as the cough becomes somewhat less distressing, and the fever abates, a favourable termination of the disease may be hoped for; occasionally, however, much service is derived from cupr. sulph. given in sufficient doses to produce vomiting; this must be done when the cough and fever have abated, and the suffocative attacks have begun. The above forms of croup are only met with in children, and seldom after their sixth year. Dr Zeroni scarcely attaches any faith to the opinion entertained by many, of the fatal nature of croup in adults. He says that he certainly has observed all the symptoms of croup most strikingly manifested in women; but these were found to depend on uterine derangement, and yielded to a mode of treatment adopted with reference to diseases of the latter kind; and he considers that where adults have sunk under croupous symptoms, they must be ascribed rather to œdema glottidis than to genuine croup.—*Henle u. Pfeufer's Zeitschrift für Rat. Med.* 1847; *Brit. and For. Med. Chir. Rev.*, July 1848.

306.—*Treatment of Asphyxia.* By Dr REID, of Liverpool.—Dr Reid suggests, that in treating the apparently asphyxiated a certain proportion of chlorine or nitrous oxide should be used with the atmospheric air employed in artificial respiration. He is led to propose this on the principle that the chief object is, independent of restoring the circulation and temperature, that the dormant irritability should be subjected to an extraordinary stimulant. While the common atmospheric air, or even oxygen gas perfectly pure, has no action, the irritative action of this gas (the chlorine) so well known in the living subject, will, in a corresponding manner, be more energetic in the lungs of the apparently drowned. In numerous experiments made on the healthy subject, and also on several different invalids, he has found that in the former, on an average of about 200 individuals, one cubic inch of chlorine, diffused through 200 cubic inches of air (common air) could be respired without exciting any irritation; but when the quantity of atmospheric air was reduced, the amount of chlorine remaining the same, more or less irritation was induced. It is unnecessary to remark on the different effects on invalids, as these varied very much, and it would be impossible to make nice applications of the sort in cases of asphyxia.

One cubic inch of chlorine may be diffused through fifty cubic inches of air for this purpose, or even one cubic inch in twenty-five cubic inches of atmospheric air. The respiratory movements once excited, the amount of chlorine may gradually be reduced. Scarcely any bad effect will supervene which cannot be relieved by ammonia and hot water. The chlorine is readily obtained from the common chloride of lime.—*Lancet*, April 22.

307.—*Vomiting caused by Relaxation of the Abdominal Parietes cured by a Bandage.*—M. Greppo reports the case of a woman whose abdominal parietes were much relaxed in consequence of repeated pregnancy, and who was troubled by habitual vomiting, which resisted all the ordinary remedies. An abdominal supporter bandage was then applied, which entirely relieved her. When, however, she neglects to wear the supporter, the vomiting returns.—*Med. Times*, June 17, 1848.

308.—*Irritable Bladder from Tapeworm.* By Mr TUFNELL.—A man of temperate habits complained of excessive irritability of the bladder, with difficult micturition. His health had been good till three months previously, when he began to suffer from dyspepsia, with irritation of the rectum and hemorrhoids. These symptoms increased, and to them were added tenesmus, and frequent calls to make water, which was voided in a twisted jet, and accompanied by severe straining, but no pain. The urine was highly acid, and loaded with lithate of ammonia. The prostate was of natural

size, but very sensitive to the touch. His symptoms were twice removed by appropriate treatment, but he returned a third time, suffering severely, and anxiously desiring an operation for his relief, being convinced that he suffered from urinary calculus. The irritation about the anus had now greatly increased, and he was observed at the same time to be frequently rubbing his nose, which led to the suspicion of worms in the intestines. A purgative of turpentine and castor-oil was administered, and the following morning a tapeworm, measuring thirty feet, was evacuated. The patient obtained immediate relief from his distressing symptoms. —*Dub. Med. Press*, Feb. 1848; and *Ranking's Abstract.*

309.—*Danger of Repressing Skin Diseases.*—Several instances have occurred in the practice of M. Devergie, illustrative of the danger which may arise from the repression of chronic cutaneous affections. The reporter of the cases sums up as follows:—1. The functional disturbance of the internal organs occurs simultaneously with the subsidence of the skin disease. 2. The severity of the symptoms is proportionate to the extent and severity of the skin disease. 3. The symptoms cease on the return of the cutaneous irritation. 4. Death may occur more rapidly than from similar internal disease produced by other causes. 5. If the internal disease be treated antiphlogistically, death is precipitated, and a fatal result always ensues if the eruption cannot be restored, or an artificial one excited.—*Gaz. des Hôpitaux*, No. 110, and *Ranking's Abstract.*

310.—*Sub-pleural Emphysema, a Cause of the Cracked Metal Sound.* By R. C. Golding.—The author observes, "I was asked to see a lad who had had a pulmonary complaint (imagined to be phthisis), for two years past; he was moribund when I saw him, and died two hours after.

On percussing the upper part of the left side immediately under the clavicle, the cracked metal sound was elicited in the most perfect manner.

On *post-mortem* inspection (corresponding to the part where the sound was produced during life), two circumscribed portions of sub-pleural emphysema were seen, together as large as a full-sized hen's egg; there was no cavity in the left lung, nor was the disease of a tuberculous character; it was an example of chronic pneumonia. It is unnecessary to particularize the other morbid appearances: suffice it that the circumscribed interlobular and sub-pleural emphysema elicited a sound indistinguishable from the *bruit de pot fêle* of pulmonary excavations.

The physical cause of its production was the collection of air chiefly in the cellular tissue over the upper portion of the left lung, which, by forcible percussion, was made to permeate the surrounding cellular tissue, returning after the percussion stroke to the situation where, before the stroke, it was chiefly collected.

The entire lung was condensed, unfitted for respiration, and closely adherent (except at the upper part) to the walls of the chest; the emphysema was doubtless due to a rupture of a superficial air-cell, and was prevented extending by the thickened and adherent state of the pleura, which had recently been inflamed."—*Med. Gaz.* July 14, 1848.

311.—*Treatment of Epilepsy by Tartar Emetic Frictions to the Scalp.*—M. Mettais narrates ten cases in proof of the efficacy of tartar emetic ointment rubbed into the scalp, so as to induce free suppuration. He states that the counter irritation should be maintained for a considerable time, as relapses have occurred when the suppuration has been too long suspended. —*Gaz. Med.* Feb. 1848; and *Ranking's Abstract.*

312.—*Retention of Urine in Cerebral Affections.*—M. Von Den Broeck states that in these cases he has almost always found the application of large cupping-glasses to the upper and inner parts of the thighs give rise to a speedy voiding of the urine.—*Brit. and For. Med. Chir. Rev.*, July 1848.

313.—*Prognosis furnished by the Tears of Children.* By M. Trousseau.—M. Trousseau states that it may be laid down as an aphorism, as seldom liable to exceptions as those of Hippocrates, that when a child sheds tears a favourable prognosis may be delivered, however menacing the symptoms; while, when this is not the case, in painful diseases, and especially if the eyes are dry and sunken in the orbits, great danger to life exists. The observation applies almost invariably to children less than two years of age, and particularly to those less than one, but may frequently be verified even until seven. In no one of his operations for croup has he ever seen a child shed tears; and he has always felt much pleased if they did so some days after, as, when they did not, the unfavourable prognosis given was almost always verified.—*Gazette des Hôp.*, 1848, No. 14, *and Brit. and For. Med. Chir. Rev.*, July 1848.

314.—*On the Erysipelas of New-born Infants.* By M. TROUSSEAU.—This disease, whatever class of society the patients belong to, whether in hospital or private practice, is almost always fatal; so that, in nine years, M. Trousseau has only seen three recoveries. A slight swelling and redness are first pointed out by the mother upon the vulva or penis, and, as the child seems well enough, the practitioner may disregard them. But the inflammation gradually extends to the abdomen and thighs, and the child becomes sleepless and remarkably pallid, sucking greedily on account of thirst, but suffering from no purging or vomiting. About the fourth or fifth day the erysipelas commonly becomes complicated with peritonitis, which kills the child within twenty-four hours; so that it is rare for it to live beyond the sixth or seventh day. There is also not unfrequently umbilical phlebitis present. When puerperal fever prevails, infantile erysipelas is not uncommon, proceeding from ulceration, which ensues upon the detachment of the funis.—*Ibid.*

IV.—PRACTICE OF SURGERY.

315.—*Case of Resection of the Scapula.* By Professor FERGUSSON.—W. H——, aged thirty-three, was admitted into King's College Hospital, on January 13th, 1847. He had suffered from disease of the right shoulder-joint for seven years, when the extremity was amputated at the articulation, at Fort Pitt Hospital, and a part of the glenoid cavity was at the same time removed. He recovered, but became the subject of abscess on the front of the chest about twelve months afterwards. On admission into King's College Hospital, the whole shoulder was enlarged, and the soft tissues hypertrophied; a great many fistulous openings existed in the pectoral region, and over the clavicle, which discharged copiously. Having determined on the propriety of removing the scapula entire, the author proceeded to operate on the 6th of February 1847. The patient was put under the influence of ether, and the clavicle was first exposed, and divided about two inches from its acromial extremity with a saw; another incision extended along the spine of the scapula, and a third in the course of the old cicatrix. Some further dissection, and a division of the attaching muscles, enabled the operator to complete the excision, the subclavian artery being the while compressed over the first rib. The axillary and other arteries were tied, and the wound closed with stitches. The patient's recovery was satisfactory, and unattended by any thing deserving particular notice. On May 5th, he was sent into the country, and a recent account reports him to be well and fat, though still occasionally troubled with small abscesses on the breast. After maceration, the bone exhibited a hypertrophied condition; the remaining portion of the glenoid cavity was carious, and its margin was surrounded by a mass of new ossific matter. The author concluded with some observations on the interest attaching to the case, from the rarity and formidable character of the operation required for the relief of the disease, and its successful issue.—*Proceedings of Medico-Chirurgical Society of London, in Medical Gazette,* June 23, 1848.

316.—*Report of a Case in which Gastrotomy was performed for the Relief of Obstruction of the Bowels.* By Mr R. DRUITT.—J. D——, a delicate boy, aged eleven, had, at the end of February last, an attack of inflammation of the bowels, which yielded to the use of calomel, Dover's powder, and purgatives. On April 1st, the author was requested to see him for a similar attack, which resisted the treatment before adopted. Vomiting supervened, and the bowels were obstinately constipated. The belly was tense, but the chief pain and tenderness were referred to one spot—a little below and to the left of the umbilicus. The use of purgatives merely excited vomiting, and the rejected matter assumed a yellow, liquid character, and had a stercoraceous smell. The symptoms varied but little, the stomach rejecting almost every thing but milk and soda-water until the 9th, when the patient appeared excessively exhausted. After this he rallied, but the bowels were unmoved; and as every reasonable measure had been resorted to, without success, to procure their evacuation, as the tenderness continued fixed to the same spot, and as there was evidently a distended state of probably both the stomach and neighbouring portion of intestine, it was ultimately determined that an operation for relief of the supposed internal strangulation should be resorted to. On the 14th, the author accordingly opened the abdomen by an incision along the linea alba, below the umbilicus, and a distinct band was soon discovered, binding

down the intestine. This was liberated; but almost simultaneously the bowel gave way at a point lower down, its contents escaping into the peritoneal cavity. This aperture was found and secured; but the patient survived only two hours and a half. On examining the abdomen after death, there were evident traces of former peritonitis, in the form of extensive adhesions. The whole of the large intestine, and a portion of the ileum, were pale, contracted, and empty. The remaining portion of the small intestine, up to the duodenum, was reddened, enormously distended, and filled with liquid feculent matter. The stomach was also greatly distended. The seat of stricture, where the band was divided, was marked and abrupt. The ulcerated opening was in the ileum, not far from the lower attachment of the band. The author considered that an earlier operation would have afforded a reasonable prospect of a successful issue.—*Ibid.*

317.—*Fungus Hæmatodes of the Testicle, doubtfully malignant.* By Dr O'Brien Bellingham.—A labouring man, aged 58, was admitted into hospital on account of an enlargement of the left testicle, of two months' standing. The testicle was the size of a hen's egg, slightly painful after being handled, but not otherwise. The epididymis was indurated; the cord healthy; the integuments unaltered in colour. He was a healthy, florid man, married, and the father of a family; of temperate habits, never had venereal disease, nor had taken mercury. He had likewise never received any injury of the part.

A year afterwards his health was still good; the tumour was increased in size, and was the seat of severe dragging pain, which extended up the cord. In other respects there was no change.

A few weeks after this, the testicle was removed, the wound healing rapidly. The tumour on section presented a pulpy appearance, except the epididymis, which was nearly as hard as cartilage. The cut surface was pale, the centre softened, and dotted with dark points of extravasated blood. The layers of the tunica vaginalis were adherent, except at a few points, and here a small quantity of limpid fluid was collected.

Seven years after the operation the patient died of bronchitis. On *post mortem* examination, the lungs were found to be emphysematous; all other organs perfectly healthy.

Instances of fungus hæmatodes of the testicle, not recurring after operation, are extremely rare; one case only is mentioned in Mr Curling's work, from the practice of Sir B. Brodie, in which, after three years, the patient was "going on favourably."—*Dublin Medical Press*, July 1848.

[From the details in this case, it can scarcely be doubted that the tumour was some singular kind of non-malignant growth, possibly scrofulous, which simulated the true cancerous fungus. The absence of cachexy, acute pain, and rapid enlargement, must have arrested even the practical surgeon's attention. The apparent characters of the tumour were so decidedly those of encephaloid disease, as to be considered perfectly characteristic by Mr Cusack. The minute structure, if examined, would probably have thrown some light on this subject.]

318.—*Removal of a Diseased Ovary; Cure.* By Dr Vaullegeard.—T. R., aged 25, menstruated at 18; had enjoyed very good health until the year 1842, when the abdomen became enlarged and the menses irregular. These symptoms disappeared suddenly, and during fifteen months the patient did not suffer any relapse; but, at the expiration of that period, the abdomen again became distended, and the menstruation deficient. On May 11, 1844, paracentesis was performed for the first time, and, twenty-five litres of transparent fluid having been removed, an ovarian tumour, of the size of the hand, was detected in the left iliac region. From that period forward, the dropsical collection formed with such rapidity and abundance, that three days before operation paracentesis was again performed for the fifty-first time. Examination through the abdominal parietes indicated the presence of an oval tumour, extending from the left iliac fossa to the right hypochondrium; its surface was rough, and the tumour moveable.

On the 15th of September 1847, the patient having inhaled ether, insensibility was produced in the space of seventy-five seconds, and an incision, three inches in length, was made to the left side of, and in a parallel direction with, the linea alba; six or eight litres of fluid were permitted to escape, and the length of the incision increased to seven inches. The tumour, of the colour of wine lees, presented itself at the orifice, and, being of a soft consistence, was laid open, in order that its bulk might be diminished by the discharge of a portion of its contents, which were of a serous and puriform character. The pedicle was, as had been predicted, found on the left side, and was

divided, after two ligatures had been thrown round it. Very little blood was lost during the operation, and the wound was united by three sutures.

During the two first days the patient felt remarkably well; she was even permitted to take broth and some wine and water. On the third day the pulse rose to 102, but the digestive functions remained unimpaired, and the intestinal evacuations regular. On the seventh day only the wound was examined; it had healed by primary union, excepting in its most interior part occupied by the ligatures. On the sixteenth day the threads were removed, and the patient had almost completely recovered twenty-five days after operation.

The tumour weighed nine pounds, and the fluids which it contained were estimated at an equal weight. Its tissue seemed of a fibro-cartilaginous nature, in the intervals of which were found gelatinous, cerebriform, and granular textures. —*Med. Times*, June 17.

[According to Dr M'Carthy, the reporter of this case, it is the first in which extirpation of the ovary has been performed in France. We regret that the microscope was not employed to determine with more accuracy the nature of the tumour.]

319.—*New Operation for Varicose Veins.* By WM. BIRD HERAPATH, M.B.—If pressure exist upon a vein at any point intermediate between its radicles and the right side of the heart, distension of the distal portion will be produced to such a degree that the valves can no longer close the dilated vein; but on removing the cause of the enlargement, the valves will again become capable of resuming their functions.

The superficial cutaneous veins most frequently affected by varix are the internal and external saphena, both of which have to pass through apertures in the deep fascia in order to reach the larger trunks, into which they deliver the circulating current. Now, should these apertures at any time be, either absolutely or relatively, too small to allow the passage of the quantity of blood carried by these veins, distension must ensue, and varix be induced.

Long standing in the upright posture creates a relative decrease in the size of the aperture, inasmuch as more blood is then sent by the heart to all the vessels of the inferior extremities, and an opening capable of passing the quantity returned in the horizontal position might become incapable of doing so in the altered circumstances here spoken of.

The cure proposed by the author consists in dividing the apertures of the deep fascia of the thigh to such an extent as to remove the impediment to the returning current of the blood. He gives a case where the varix was confined to the internal saphena vein and its branches, and where it was completely removed by dividing the falciform process of the fascia lata. He remarks, that where the popliteal vein is varicose, the case is one to which the operation in question is not applicable; as the seat of the obstruction is then probably on or above the iliac vein. The same will be the case when the spermatic veins are involved in the diseased condition.

The following is the author's description of the operation in a case of extreme varix of the internal saphena vein alone, in which, as has been said above, the cure has been complete:—Ether having been administered, I pinched up a fold of skin between my fingers of sufficient size, and then transfixed and divided it with a pointed bistoury; an incision three inches in length was thus obtained, obliquely upwards and inwards, immediately over the swollen termination of the saphena vein. The superficial fascia was remarkably thin at this spot, and, having carefully dissected it away from its attachment to the falciform border, I then depressed the vein with the forefinger of the left hand, and with the pointed bistoury, passed directly upwards immediately beneath the iliac layer of fascia, I divided the crescentic border of the saphenous opening to the extent of half an inch, which, of course, considerably enlarged the aperture, and at once removed the stricture; the varix immediately disappeared. At this stage of the operation the patient most unexpectedly gave a kick; the point of the bistoury punctured one of the abdominal branches of the saphena, probably the superficial epigastric, and hemorrhage to a greater extent occurred than the operation necessarily involved. Pressure with the thumb immediately controlled, and a spongeful of cold water soon stopped it; about two ounces of blood were lost. The wound was closed by two points of suture, and drawn together by adhesive plaster, and the whole covered by a pad of wet lint held on by a few turns of bandage.—*Med. Times*, July 15, 1848.

320.—*Varicocele successfully treated by Operation.* By M. VIDAL DE CASSIS.—A man, aged twenty-two, was admitted into M. Vidal's wards at the Hôpital du Midi. He presented a varicocele on each side of the scrotum, which caused great pain and

inconvenience. M. Vidal resolved upon an operation, which he performed in the following manner on the 8th of September:—The enlarged veins having been carefully separated from the other elements of the spermatic cord, a silver wire was passed through the scrotum, so as to embrace the posterior aspect of the varicose plexus; another wire was placed in front, entering the scrotum at the same orifices as the first; the wires were then twisted on each other, so as to roll the enlarged veins round the metallic threads. On the 19th of September the wires were removed by incision; and on the 8th of October the patient left the hospital completely cured.—*Med. Times*, June 17.

321.—*On Wounds of the Chest.* By G. J. Guthrie.—Mr Guthrie recommends the treatment of wounds of the chest in the following manner:—1. All incised or penetrating wounds of the chest should be closed as quickly as possible, by a continuous suture through the skin only, and a compress supported by adhesive plasters, the patient being afterwards placed on the wounded side. 2. If blood flows freely from a small opening, the wound should be enlarged, so as to show whether it does or does not flow from within the cavity. If it evidently proceed from a vessel external to the cavity, that vessel must be secured by torsion or by ligature. 3. If blood flow from within the chest, in a manner likely to endanger life, the wound should be instantly closed; but as the loss of a reasonable quantity of blood in such cases, say from two to three pounds, will be beneficial rather than otherwise, this closure may be delayed until syncope takes place, or until a further loss of blood appears unadvisable. 4. If the wound in the chest have ceased to bleed, although a quantity of blood is manifestly effused into the cavity of the pleura, the wound may be left open, although covered, for a few hours, if the effused or extravasated blood should seem likely to be evacuated from it, when aided by position; but as soon as this evacuation appears to have been effected, or cannot be accomplished, the wound should be closed. It must be borne in mind that the extravasation which does take place is usually less than is generally supposed—a point which auscultation and percussion will hereafter in all probability disclose. 5. If auscultation and percussion should indicate that the cavity of the pleura is full of blood, and the oppression of breathing and the distress are so great as to place the life of the patient in immediate danger, the wound, although recent, should be reopened. 6. As soon as the presence of even a serous fluid in the chest is ascertained to be in sufficient quantity to compress the lung against the spine, and time has been allowed for the closure of the vessel from which blood originally flowed, a counter-opening should be made in the place of election for its evacuation by the trocar and canula, which may be afterwards enlarged, unless the reopening of the wound should be thought preferable, which will not be the case unless it should be low in the chest.—*Medical Times*, April 8, 1848.

322.—*Elastic Belts in the Umbilical Hernia of Children.* By Mr Spong.—Well regulated, constant, and equable pressure, seems all-sufficient for the cure of this disease in infants, and the elastic belt, presently to be described, answers the purpose effectually. It consists of a piece of vulcanized caoutchouc, about six inches in length, and three inches and a half in breadth, to either end of which is attached a piece of fine white linen web (a species of girthing used by saddlers, and manufactured of about the same breadth), with tapes appended, which are tied behind the back. The piece of vulcanized India-rubber should be of such a length, according to the size of the child, as will embrace rather less than one-third of the circumference of the abdomen, the circle being completed by the pieces of linen web. This material is sufficiently stiff to prevent its creasing; its elasticity admits of the various movements of the child, in crying, coughing, &c.; and in whatever position the body is placed, it always keeps up a determinate pressure. The patient soon becomes accustomed to its use, and it may be worn advantageously by night as well as by day; moreover, it retains its position accurately.

This substance is made of various degrees of thickness; that which is about as thick as half-a-crown will be found to answer best. Another small circular piece, twice as stout as this, and about two inches in diameter, should be fixed to the centre of the first by a stitch of strong silk passed through the centre of both; this acts well as a pad immediately over the hernia.

This instrument is simple, cheap, and efficient. Mr S. has tried it in several cases, and with uniform success. The cure usually occupied a period of from three to four months. (But in one case, where, from neglect of the mother, the hernia had attained the size of the child's fist, the use of the belt was required for six months.) The same belt, made of

stouter material, will be found to answer for reducible umbilical hernia of adults, as the instrument is not displaced by exercise, and the patient can employ whatever amount of pressure he finds best for his particular employment.—*Lancet*, June 3.

V.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

323.—*Etherization in Labour.* By Drs PUTNAM, ROUX, CLARK, and MURPHY.—Dr Putnam has adopted this practice in nineteen cases, and states that he has not observed any serious accident immediate or remote, that could be attributed to the use of ether, and that he has never met with any formidable symptoms. In the commencement of labour, he believes it may promote the dilatation of the os uteri, and it dissipates the despondency and irritability which often attends this stage. Towards the close of the labour it is to be given without reserve. Dr Putnam has failed to detect any thing unusual in the pulsations of the fœtal heart during etherization, and no ill consequence to the child after birth could be observed. In regard to the mother, he believes that its use eminently accelerates her convalescence.

Dr Putnam thinks that the etherization diminishes both the parturient efforts and the resistance offered to them by the soft parts of the mother, and consequently that the duration of the labour is in most cases unaffected. In some rare cases, however, he believes that the ether suspends the process of parturition, and must consequently be laid aside. We shall give his concluding paragraph in his own words :—"There are conditions, however, in which the positive unequivocal advantages of ether far outweigh any temporary evils : in which it is not merely yielded to the patient's comfort, but demanded by her necessities. The muscular action may be inordinate, wasting the strength without advancing the labour—inflicting injurious pressure upon the soft parts, and thereby compromising the safety of mother and child. These, besides various mental disturbances, are materially controlled and relieved by the use of ether. Above all, in obstetric operations, the patient is saved much suffering. Apart from the prostration and other immediate and remote evils consequent upon the use of antimony, opium, and venesection, which to be effective must be full, they often fail to produce the desired relaxation and repose. If the cases related should not prove to be exceptions, we have in ether a most valuable auxiliary. Any one who has encountered the resistance and benumbing pressure of the uterus in a case of difficult turning, will feel that it was here pre-eminently useful. Under the particular combination of circumstances the operation might have been difficult and dangerous, if not impossible, unless by means of an unjustifiable degree of force. In no case is violence more to be deprecated."—*Boston Medical and Surgical Journal*, February 2, 1848.

After a careful investigation of the subject of etherization in labour, Dr Roux has arrived at the following conclusions. 1st, That females in the puerperal state suffer no injury from the inhalation of ether ;—2d, That in ordinary labours it annuls the pain without interfering at all with their progress ;—and 3d, That in difficult labours it is highly desirable, in order to prevent the suffering attendant upon them.—*Gazette Médicale*, October 9, 1847.

We shall quote Dr Clark's own words, containing the conclusions at which he has arrived on the use of ether in obstetrical practice. In his paper he details sixteen cases.

"In general (he says) any morbid state was rectified by the etherous influence, so that nausea and vomiting disappeared, convulsive tendencies were removed, and the pulse raised if previously depressed, and lessened in frequency if antecedently too rapid.

"In most cases, a perfect etherization destroyed the painfulness of labour, even when the patient retained consciousness. In other and rare instances, the sufferings were abated but not removed, even when the intellectual powers seemed lost for the time.

"Generally, the duration and frequency of the labour-actions were lessened, without any apparent retardation of the usual result of the labour; nor does there seem to have been any unusual proclivity to hemorrhagy in my cases.

"On the whole, my trials of ether as a torture-saving agent, have been satisfactory to me and my patients, and a sufficient number of cases have come under my notice, to justify me in the continuance of the use of a remedy which seems not only to save sorrow and suffering in com-

mon cases, but to be doubly useful when there are morbid complications. The extraordinary length of time during which delicate females can bear a strong etherization, seems to me to put at rest, if that has not been done by others, any reasonable doubt of its perfect safety, when used in the simplest manner, by respiring through a sponge."—*Philadelphia Medical Examiner*, March 1848.

We shall merely quote in addition the conclusions arrived at by Dr Murphy, in regard to the use of *chloroform* in parturition. 1st, Chloroform does not interfere with the action of the uterus unless when given in doses too large. 2d, It relaxes the maternal passages, and especially the perineum. 3d, It subdues nervous irritation and restores nervous energy. 4th, It secures to the patient some hours' repose after delivery. 5th, Its injurious effects, if any, when an ordinary dose is given, seem to depend on constitutional peculiarities or improper management.—*Lancet*, April 19, 1847.

324.—*Accidental Anæsthesia during Labour, from an over-dose of Morphia.* By Dr Foulke.—Mrs R—— of New Hope, æt. 16, was taken with premature labour-pains at the end of the eighth month of pregnancy. In attempting to arrest them, Dr F. made up a potion, by dissolving one-half grain of sulphate of morphia in some water in a cup, and directed that a teaspoonful of this should be given every twenty minutes. He accidentally left a bottle containing two drachms of morphia beside his patient, and from which she, misunderstanding Dr F.'s directions, took repeated doses, till she had swallowed eleven and a half grains. She suffered from a painful itching and pricking of the skin, and other distressing symptoms, for five hours and a half before she fell into a profound sleep. She then lost all consciousness; respiration occurred not oftener than once in forty-five seconds. She was somewhat disturbed every twenty minutes, but gave no sign of suffering pain. Labour slowly advanced, and her child was born in a state of narcotism, breathing but about once in fifty seconds. It did not recover till after seven hours.

The mother was for twenty-four hours plunged in this deep narcotism. To rouse her she was given at an interval of twenty minutes two doses, each of two grains of tartar-emetic, and twenty of ipecacuan; and, as this produced no effect, three or four large doses of ground mustard were also given at twenty minutes' interval; but no vomiting was produced. No diarrhœa followed, and she made a good recovery.—*American Journ. of Med. Sciences*, April 1848.

325.—*Cases of Cæsarean Section.* Godman, Stoltz, and Celestino de Pelayo.—Mr Godman's patient, after having borne three living children, became affected with malacosteon, and at her fourth confinement was delivered by craniotomy. On examining, per vaginam, at the commencement of her fifth labour, the pelvis was found to have assumed an extreme degree of deformity; the outlet was of the form of the figure 8, the two tuberosities of the ischia being in contact. The greatest diameter was found to be about an inch and a quarter, the least not an inch. The os uteri could not be reached by the finger at all. The operation was immediately performed in the usual way, and after some time the woman made a complete recovery. The child was born alive.

She became again pregnant. Abortion was induced at the end of the second month, and after this she gradually sank and died.—*British Record of Obstet. Medicine*, February 15, 1848.

M. Stoltz' patient, after being naturally delivered, at the full time, of her first child, came into the hospital complaining of violent lacerating pains in the sacrum. On examination, a small medullary sarcomatous tumour, springing from the sacrum, was felt projecting into the pelvic cavity. The pain continued incessantly till the commencement of her second pregnancy (about three years afterwards) when it diminished, and disappeared entirely at the end of the second month. From this time, her health improved greatly, and her embonpoint manifestly increased. At the commencement of the ninth month of her second pregnancy, she again entered the hospital. The sacral and gluteal regions were bulging in the form of a segment of a large sphere, consisting of a malignant tumour, which also filled up the whole pelvic cavity. The Cæsarean operation was performed in the usual way, and the child was born alive. The mother also made a good recovery and suckled her child. About six months after this delivery, she died worn-out by the further increase and progress of the malignant tumour.—*Gaz. Medic. de Strasbourg*, Mai 20, 1848.

In the following case the operation was performed after the death of the mother. Dr Celestino de Pelayo's patient was a

deformed and rachitic woman, having an habitual dyspnœa. Labour supervened at the end of her first pregnancy, and advanced naturally till the os uteri became completely dilated, and the head somewhat engaged in the pelvic cavity, when, all at once, she cried out that she was choked, and was seized with tetanic convulsions and died. The Cæsarean operation was immediately performed, and a healthy female child extracted. After insufflation, frictions, &c., it was completely recovered from the state of asphyxia in which it was born. Our author has performed this operation six times, and in this case alone has he been so fortunate as to rescue the infant.—*El Telegrapho Medico*, 1*er Trimestre* 1848; and *Union Médicale*, June 8, 1848.

326.—*Birth of a Double Monster.* By M. CAPURON.—In the pages of this month's *Journal* is recorded a case of the birth of a double monster, occurring in the practice of Dr Lyell of Dundee. And we are glad to be able, so opportunely, to lay before our readers the following additional instance of this rare complication of labour.

In May last, M. Capuron laid before the Parisian Academy of Medicine, the following case which had occurred in the practice of M. Derien of Paimpol. The fœtus, a complete double monster (*Sternopage* of Geoffroy St Hilaire), had arrived at the full term, and was extracted from the maternal passages without the aid of any instruments, and without injuring the mother, who made an excellent recovery. One foot of each child presented, and, by traction exerted upon both, the monster was made to descend as far as the axillæ, when the arms were brought down, and then came the turn of the two heads. Of these, the one was delivered after the other by traction at the mouth, and the subsequent aid of the forceps.—*Gazette Médicale de Paris*, No. 23, 1848.

327.—*Rupture of the Uterus.* By Dr TRASK.—In the last two numbers of the *American Journal of the Medical Sciences*, Dr Trask presents us with the histories of upwards of 300 cases of rupture of the uterus, occurring either during utero-gestation, or during parturition. We shall give briefly some of the general results of his inquiry.

In a great proportion of cases the laceration seemed to depend upon some previously existing diseased condition of the uterus itself, and therefore its occurrence in a great number of instances was unavoidable. Of 49 cases in which the condition of the uterine structure is mentioned, in only 10 is it spoken of as being healthy. In the remaining 39 it was found that there existed at some part or other of the uterine walls a thinning or softening of its substance, or both, arising in most cases either from mechanical injury or from idiopathic causes, as chronic inflammation, or inflammation excited during a protracted labour. The risk of rupture when any portion of the uterus is in an unhealthy condition, depends directly upon the amount of opposition presented to the expulsion of the child.

In upwards of 60 cases there existed a diminution of the diameters of the pelvis to a greater or less degree, and in several the fœtal head was hydrocephalic; where, although the pelvis was of standard dimensions, there was nevertheless a relative deficiency, and this disproportion predisposed to rupture of the uterus in the same way that a contracted pelvis would.

The age of the patient seems to exert a considerable influence over the occurrence of rupture. In the following table, containing 141 cases, it is shown to increase in frequency in a ratio proportional to the age of the patient. In mothers

Below 20 years;	3 cases occurred.
From 20 to 25 years;	14 cases occurred.
From 25 to 30 years;	34 cases occurred.
From 30 to 35 years;	36 cases occurred.
From 35 to 40 years;	37 cases occurred.
From 40 to 45 years;	15 cases occurred.

It is stated by several writers, that rupture during a first pregnancy or labour is rare. The following table, however, exhibits even a larger number, during a first labour, than during any other. The discrepancy may be accounted for by the fact, that the comparison is usually made in the mind between the first labour and all subsequent labours taken together, and not, as it should be, between the first and any other individual labour, as between the first and second, or the first and sixth:

In 1st pregnancy;	24 cases occurred.
In 2d pregnancy;	18 cases occurred.
In 3d pregnancy;	17 cases occurred.
In 4th pregnancy;	21 cases occurred.
In 5th pregnancy;	18 cases occurred.
In 6th pregnancy;	16 cases occurred.
In 7th pregnancy;	9 cases occurred.
In 8th pregnancy;	5 cases occurred.
In 9th pregnancy;	5 cases occurred.
In 10th pregnancy;	9 cases occurred.
In 11th pregnancy;	8 cases occurred.
In 12th pregnancy;	3 cases occurred.
In 13th pregnancy;	2 cases occurred.

Data are not afforded us from which

we might calculate the influence of the duration of labour upon the frequency of the occurrence of rupture. The following table exhibits merely the number of cases occurring in labours of different lengths. It does not give us the proportion of ruptures to the same number of cases of labour of different lengths. From other sources we know that the liability to rupture increases with the increased duration of labour. In labours

Below 6 hours; 23 cases occurred.
From 12 to 24 hours; 18 cases occurred.
From 24 to 36 hours; 16 cases occurred.
Above 36 hours; 20 cases occurred.

In reference to the question of interference or non-interference in cases of rupture of the uterus, we shall content ourselves by stating the statistical results of Dr Trask's inquiry. Of 89 cases left undelivered, 24 recovered, or 27 in 100; of 31 cases delivered spontaneously, 11 recovered, or 35 in 100; of 154 cases artificially delivered, 57 recovered, or 37 in 100.

A comparison, then, of those delivered by art and of those abandoned undelivered, yields a proportion of 37 per cent. of the former as saved, to 27 of the latter, showing that the chances under the former treatment are considerably better than under the latter. This is to be regarded as a mere approximation to the truth, as will be shown afterwards. However, it does not give the actual success of either course of procedure, but still it enables us to form some idea of the relative success of the two.

But even were not the success of artificial delivery greater than that of non-interference, the fact that those delivered survive the accident longer than those who die undelivered, shows that it is the part of humanity to give the patient the chance of even the few additional hours of existence which delivery affords. For if we take the average of those of both classes who survived less than forty-eight hours, we find that the average continuance of life after rupture with those *delivered is twenty-two* hours, while of those *undelivered* it is only *nine* hours.

In the 89 cases in which no treatment was adopted, but the patients were abandoned to the resources of nature, 24 recovered. In these instances the fœtus in some became invested in false membranes, and was in this way separated from the viscera of the abdomen. Most generally, however, after a few months it was discharged piecemeal through fistulous openings in the abdomen, vagina, or rectum.

Of 104 cases where the head, with the whole or part of the child, had escaped into the peritoneal cavity, in 57 the patients were abandoned; of these 18 were saved and 39 lost. Of 30 delivered by turning, &c., 9 were saved and 21 lost. In 17 gastrotomy was performed; of these 13 were saved and 4 lost.

Of 63 cases of rupture with contraction of the pelvis, 11 were abandoned, and all died. Perforation was performed in 19; of these 3 were saved and 16 lost. Turning, with the assistance of the lever, crotchet, forceps, &c., in 25 cases; of these 11 were saved, and 14 lost. Gastrotomy in 8 instances, 5 mothers were saved and 3 lost. Or total of both cases —Gastrotomy—saved, 18 ; lost, 7.

Undelivered—saved, 18; lost, 50.

Other modes of delivery—saved, 23; lost, 51.

It would seem, then, that more mothers survived after gastrotomy had been performed than under any other plan of treatment. It is most probable that this operation was performed chiefly, if not exclusively, in those cases in which the fœtus had altogether escaped into the cavity of the abdomen, with firm contraction of the edges of the uterus, or else in cases of so great a degree of contraction of the pelvis as to demand the Cæsarean section. But whether performed for one or the other, it is of no consequence. This will appear from the fact, that gastrotomy depends for its success in no respect upon the capacity of the pelvis to allow a child to pass, or whether the rent of the uterus is permanently closed, or will still admit the hand.

Dr Trask wishes it to be distinctly understood, however, that the above statistics are not to be considered as affording the actual *proportion* of recoveries and deaths after the respective modes of treatment. Few are ambitious of publishing unsuccessful cases, and hence the reason of so large a proportion of successful terminations that the above cases exhibit. But there is no reason why such apparent success should follow gastrotomy, were not its results in reality, in the main, more satisfactory than that of the other modes of delivery. It is an operation that few practitioners have the nerve to undertake, amidst the exciting scenes by which one is surrounded on the occurrence of rupture of the womb. A degree of *éclat* always attends its performance—even though the result prove unsuccessful; and there will thus be no causes tending to *suppress* the publication of unsuccessful cases of gastrotomy, which do not apply in an equal and even

greater degree, to the other modes of operation, as perforation, the application of the forceps, or version.

If the success of gastrotomy, then, be so much greater than that of other modes of delivery, it must be in consequence of its more fully meeting the indications that such cases present, than either of the other modes.—*Amer. Jour. of Med. Sc. for* January and April, 1848.

VI.—MATERIA MEDICA AND THERAPEUTICS.

328.—*On the Production of Local Anæsthesia.* By Professor SIMPSON and Mr NUNNELEY.—It would certainly be a most valuable attainment in medicine and surgery, could we induce a local and limited anæsthesia, without the temporary loss of consciousness, and constitutional disturbance which inseparably accompany a state of general anæsthesia. Hitherto all attempts at producing such a state in any part of the human body have failed, and, with our present materia medica, we can see no reasonable prospect of success. In experiments on the human hand, only a partial, and probably also a merely superficial, anæsthesia has been thus occasioned. It is very remarkable, that immersion of the hand in water, of very high or of very low temperature, produced in Dr Simpson's trials a benumbing influence, as great, if not greater than that following insertion of the hand for hours into liquid chloroform, or chloroform vapour; while, in the same individuals, strong tinctures of opium, Indian hemp, and of aconite, produced little or no appreciable anæsthetic effect. Dr Simpson has arrived at the following conclusions:—1. In articulate animals, complete local anæsthesia can be produced by the direct application of liquid chloroform, or of its vapour. 2. In batrachian reptiles, the tail or a limb can be affected in the same way; but if the application be continued, general anæsthesia speedily results from the absorption of the chloroform. Mr Nunneley states that the anæsthesia advances from the limb acted upon, first, to the corresponding extremity of the other side, and then gradually involves the whole body; but his recorded experiments do not warrant this conclusion. 3. In the smaller mammalia, a single limb, or even the whole posterior half of the body, can be in this manner rendered anæsthetic. 4. In man, partial, and probably superficial, local anæsthesia of a part, as the hand, can be produced by exposing it to chloroform vapour; but the part thus acted on cannot be cut or punctured without pain. Mr Nunneley states, that before an operation for staphyloma, he was in this way able, not only to destroy the sensibility of the eye, but also to paralyse its muscles. In Dr Simpson's experiments, the burning pain produced by the application of chloroform vapour to the eye, or even to the eyelids, was such as to prevent the continuance of the experiment in any case above two or three minutes, and, consequently, no anæsthetic effect was obtained. 5. An agent, endowed with greater activity, would probably be dangerous, by its acting too powerfully on the general economy, before the local anæsthesia was established to a sufficient depth. 6. Direct anæsthesia, by any known drug, is objectionable, on account of the accompanying vascular irritation. 7. When the surface is broken, the application of chloroform would be too painful to be endured; and, indeed, no small degree of suffering sometimes arises from the exposure of the unbroken skin to its action.—*Provincial Medical and Surgical Journal*, Nos. for June 28, and July 12, 1848.

329.—*On the Therapeutic Properties of Atropia.* By DONOVAN, CUNIER, and BOUCHARDAT.—This alkaloid represents perfectly the active properties of belladonna, for which it may be advantageously substituted for external, and perhaps also for internal use. Atropia crystallizes in white silky prisms; it is odourless, very soluble in alcohol and ether, but requires five hundred times its weight of water for solution. The solution is bitter, and has an alkaline reaction. The alkaloid dissolves readily in acids, as the nitric and muriatic, forming crystallizable salts. It is expensive (one shilling per grain); but this is of less consequence, as, on account of its activity, the doses prescribed are very small.

Atropia is an energetic poison; one-sixth of a grain has occasioned in man all the serious effects characteristic of the poisonous Solanaceæ—dilatation of the pupil, dimness of vision, nausea, dryness and sense of constriction in the pharynx, feeble pulse and tendency to syncope, coldness of the surface, aphonia, and delirium. Bouchardat and Donovan prefer it to the extract or tincture of belladonna for internal exhibition, on account of the greater accuracy with which it may be dosed.

[The extract is undoubtedly very unequal in its effects, and, could we rely on the purity of the alkaloid, its solution would probably form a preparation of certain efficacy—a point of the first importance in the use of all drugs. The activity of a medicine is no objection to its internal use, provided the preparation employed is of uniform strength, *and is of such a nature* as to act uniformly on the economy. If a certain amount of physiological action is to be developed, it is immaterial whether it be obtained by the exhibition of one-tenth of a grain of an alkaloid, or half a drachm of the crude drug, or an extract of it. In the first case, by giving the alkaloid in solution in water, to which a little acid has been added, we secure the absorption of the whole dose prescribed, and can calculate with considerable certainty on the amount of its action. On the other hand, when an extract is used, its solution in the stomach is rapid or slow, perfect or imperfect, according to a variety of circumstances over which we have little control.]

The expense of atropia presents a strong inducement to its sophistication. Mr Donovan proposes the following process for purifying it, by which the apothecary may protect himself against any commercial fraud. Dissolve one drachm of commercial atropia in an ounce of rectified spirit. If there be a residuum, separate it; then add six ounces of distilled water, and shake the mixture; no change appears at first, but after twelve or eighteen hours, the atropia forms into beautiful stellated groups of crystals, adhering every where to the sides of the vessel. The liquor being poured off, the crystals are collected on fine bibulous paper, and dried in the air. This is pure atropia, on the unvarying nature of which the physician may place complete reliance.

Bouchardat recommends its internal exhibition in those diseases, in the treatment of which belladonna and the other Solanaceæ have been found useful, as epilepsy, chorea, pertussis, and hysteria, and as an anodyne in neuralgia, rheumatism, cancer, &c.

[Belladonna is, with the French, the favourite anodyne for internal use; but for this purpose it bears no comparison with monkshood. The preparation of the latter plant, which we saw in most common use in Paris, was the watery extract, the weak and uncertain activity of which fully accounts for the low estimation in which the drug was held. For the last two years, an alcoholic tincture, of the strength recommended by Dr Fleming, has been employed by several physicians (Bouchardat, Trousseau, Tessier), who now entertain, as might have been anticipated, a very much higher opinion of its value as a sedative and anodyne.]

To return to atropia. Bouchardat begins its administration with one-twelfth of a grain, increasing gradually to one-sixth of a grain, and he has even given higher doses. He recommends the following preparation:—

Atropia,	1 gramme (15 grs.)
Rectified spirit,	40 ...

Dose one to five drops.

[As this tincture cannot be applied to the eye in ophthalmic surgery, for which purpose a watery solution must be used, we think it better to reject it entirely, and to propose a solution adapted equally for internal and external employment. It is very inconvenient having several preparations of an active drug, more especially when they resemble each other in appearance, but differ in strength.

Atropia,	8 grains,
Water,	1 ounce.

Dissolve with the aid of a drop or two of muriatic acid. This is quite a manageable strength for internal use; the dose being from three to ten minims. A drop or two of this solution, placed between the eyelids, causes complete dilatation of the pupil in from five to ten minutes.]

For the use of children affected with hooping-cough, Bouchardat recommends a syrup,—

Atropia,	1 décigr.
Water,	10 grammes.

Dissolve with the aid of a drop of muriatic acid, and add

Syrup,	1000 grammes.

100 grammes of this mixture contain 1 centigramme of atropia. Dose 20 to 100 grammes. Atropia may be given also, in powder mixed with sugar, or with honey and liquorice, in the form of pill.

For *external use*, the solution in water, which we have indicated above, is the best preparation. It dilates the pupil quickly and completely, and is a cleanly application. M. Cunier relates several highly interesting cases, in which he succeeded, by the daily application of atropia during several weeks, in breaking up old adhesions of the iris, and opening up the occluded pupil. In ophthalmia, accompanied with intense photophobia, it often affords great relief.

In the form of ointment it is employed usefully to relax spasmodic contractions of different organs, as of the cervix uteri, anus, and urethra.

Ointment of atropia.

Atropia,	4 grains.
Diluted nitric acid,	10 minims.
Axunge,	1 ounce.

A small portion only, not greater than the size of a pea, should be applied at a time.—Bouchardat and Stuart Cooper, *Annuaire de Thérapeutique*, 1848; Cunier, *Annales d'Oculistique*, 1847; Donovan, *Dublin Med. Press*, May 31, 1848.

To dilate the pupil, Mr Walker of Edinburgh dissolves two grains in an ounce of water, with a few drops of acetic acid, and applies a single drop of this solution to the conjunctiva. Dilatation of the pupil commences in twenty minutes, is completed in about four hours, and lasts from two to three days.—*Christison's Dispensatory*, 2d Ed. 1848.

330.—*On the Counteraction of the Ill Effects of Mercury by Dulcamara.* By M. BRETONNEAU.—M Bretonneau, from long observation, has convinced himself that the too prolonged use of mercury gives rise to symptoms, besides those due to its peculiar action on the nervous system, quite analogous to those of secondary syphilis. He has also been led to form a very high opinion of the power which the *Solanum dulcamara* possesses as a preventive, or as a curative of these. He lays great stress, however, upon the mode of its administration. Two drachms (prepared as decoction) are to be given daily for the first week, four for the second week, and so on, adding weekly two drachms until ten are attained, which brings the patient to the sixth week, at which time the dose is to be gradually diminished, until two drachms are again attained, when the medicine is to be discontinued.—*Rev. Méd. Chir.* vol. iii. p. 40; and *Brit. and For. Med. Chir. Rev.* No. 3, July 1848, p. 271.

331.—*Anthelmintic Drugs employed in Abyssinia.* By M. SCHIMPER.—The great frequency of tœnia among the Abyssinians, is attributed by the author to the use of badly prepared bread, and of raw flesh, the favourite dish of all classes of the people, which is seasoned with a detestable "sauce naturelle," collected in the large intestines of the sheep, goat, and antelope. There are various qualities of bread; the best is made of "tef" (Poa Abyssinica), but, on account of its high price, this is only enjoyed by the wealthier classes, who are for that reason, according to the author, less subject to worms. The inferior breads are prepared from maize, peas, beans, and barley: wheat is rarely employed. The rich Mahometans enjoy comparative immunity from the disease, which is due as much to the use of good bread, as to their not being permitted by the Koran to eat unprepared flesh. The Europeans who have been established for many years in Abyssinia, but who eat only boiled or roasted meat, and avoid the inferior breads, are quite exempt from worms; while those who have fallen into the habits of the natives in this respect, suffer equally with them.

The following are the drugs employed as anthelmintics—

1. Cosso — *Brayera anthelmintica*, Kunth—Rosacæ. Part used; the flowers, or rather the inflorescence. (Cosso and Habbe are Abyssinian names for tœnia.)

2. Habbe Tschakko; bulbs of the *Oxalis anthelmintica*, Al. Br.

3. Habbe Zellim; leaves of the *Jasminum floribundum*.

4. Bolbilda—*Celosia adoensis*, Hochstetter—Amaranthaceæ. The leaves, flower, and fruit are the parts used.

4. Roman; bark of the root of the *Punica granatum*.

6. Musenna; bark of an undetermined leguminous plant.

7. Saoria; fruit of the *Mœsa picta*.

8. Angogo; fruit of an undetermined plant.

9. Ogkert; root of the *Silene macrosolen*, Hochstt—Caryophyllaceæ.

Of these nine drugs, the Saoria and Musenna are reputed the most effective, not only killing, but likewise expelling the parasites. The others require to be followed up by purgatives.

The *Brayera anthelmintica* is a strong, lofty tree, indigenous to Abyssinia. It is met with abundantly on the mountains, growing at an elevation which indicates that it might be successfully cultivated in the warmer parts of Europe. The Brayera has a very thick trunk; the foliage is beautifully pennate, and its small and extremely numerous flowers are disposed in an elegant panicle. It is this inflorescence which the Abyssinians have employed from time immemorial, under the name of Cosso, to destroy the tœnia. There are two kinds of flowers, male and female; but in commerce they are usually mixed. They lose their properties by keeping, and are usually supposed to be inert after three years. A handful of the flowers forms an ordinary dose. They are reduced to powder, in which state they are suspended in a glass of water, and immediately swallowed. This mixture passes rapidly into fermentation, becoming at the same time acrid and emetic.

The Cosso produces an unpleasant sense of irritation and constriction in the fauces, and sometimes occasions constipation; for which reason it is usual to

conjoin it with purgatives. It acts with considerable energy, and promptly affords relief to the acute pains in the belly, occasioned by the worms.

[If the results of recent trials made in Paris with the powdered flowers, may be credited, the Brayera appears to be a very powerful anthelmintic.]

The bulbs of the *Oxalis anthelmintica* are broken and digested with water, so as to form a mixture, which is taken when the stomach is empty. Although the taste is very disagreeable, this remedy is in general use, on account of its slow and gentle action. The plant grows abundantly in all parts of Abyssinia.

The *Jasminum floribundum* is a severe and dangerous drastic purgative, and is rarely used. The *Pomegranate* is seldom employed on account of its scarcity. It is not indigenous to Abyssinia.

The *Mœsa picta* is a vigorous herb, which grows in abundance on the sides of the mountains. For administration, the ripe fruit is powdered and mixed with water. Of all the drugs enumerated, it is the least disagreeable; at the same time, it kills and effectually expels the whole worm; moreover, as it has no injurious action, M. Schimper strongly recommends it to the notice of European physicians.—*Gaz. Méd. de Strasbourg*, No. 4, 1848.

332.—*On the Efficacy of the Seeds of Phellandrium aquaticum in Affections of the Respiratory Organs.* By Dr Michea.—As Dr. Michéa freely admits, the use of phellandrium is no new discovery in medicine; but, notwithstanding the incontestable energy of its action, it is but little used in the present day. It is much more frequently employed in veterinary than in ordinary medicine; and its febrifuge, tonic, and even sedative properties, which were so highly appreciated by the practitioners of the last century, have been almost wholly neglected by those of our own day; we therefore owe a debt of gratitude to Dr Michéa for having replaced this medicine among our therapeutic agents.

The following remarks give a brief exposition of its action, and of the facts advanced by Dr Michéa in support of its employment. It is, especially in bronchitis, chronic catarrhs, pulmonary phthisis, and asthma, that its use has been attended by the most favourable results. These seeds are at once stimulating and sedative, calm the cough, diminish the oppression, or wholly remove it by facilitating expectoration; exercising so remarkable an influence on the organs of respiration, as almost to verify the words of Lange, who said that these seeds put a stop to spitting of blood, arrested the development of pulmonary tubercles, by opposing their softening, whilst they contributed to the cicatrization of the cavities.

They may be taken twice a-day, reduced to powder, in doses of 5 decigrammes, mixed with sugar; this medicine is, however, more agreeable, and appears to act with more certainty and rapidity, when given as a syrup. From two to four spoonfuls should be given, without intermission, for six weeks or two months; as it is only after that length of time that its salutary effects are appreciable.

Amongst other observations drawn from his own practice, M. Michéa cites three cases:—one of incipient pulmonary phthisis; another of chronic bronchitis, which had resisted several other modes of treatment; and the third, of nervous asthma.

Without entering into a detailed report of facts, the symptoms described leave no room for doubting the diagnosis established by Dr Michéa; and whilst we take into consideration the mode of treatment previously adopted, the time, and the regimen prescribed, conjointly with this medicine, we cannot deny the evidently favourable action which it exercised.

It should also be remarked, in support of the practical facts recorded by Dr Michéa, that M. Recamier, more than twenty years since, frequently employed the seeds of phellandrium with undoubted success at the Hôtel-Dieu, for cases analogous to those above described.—*Bulletin de Thérapeutique*; and *Brit. and For. Med. Chir. Review*, No. 3, July 1848, p. 272.

333.—*On a Solution of Iodine in Oil.* By M. Marchal.—This preparation has superseded the other forms of iodine at the Val-de-Grace. M. Marchal, believing that cod-liver oil owes its virtues to the small quantity of iodine which it contains, concluded that a more effective preparation of this substance than the iodide of potassium is found to be, might be made by combining it with an organic body; in which state the drug would probably be longer retained in the economy. He selected an oily body, in the hope that the oil, by forming an emulsion with the bile, would allow of the substance being digested in the small intestines, and enable the stomach to become relieved of its presence. In this way, large doses of iodine can be administered, if requisite, without irritating the latter organ; while the iodine

is eliminated by the urine much more slowly than is the case with the iodide. At the same time, its absorption is made certain by the fact of its not being detected in the fæces. The iodine is dissolved in fresh almond oil as wanted, in the proportion of one part to fifteen, and of this an emulsion is made with gum tragacanth and the milk of almonds. The minimum dose is one grain, gradually increased to six grains. M. Marchal has used it extensively in the treatment of buboes and other glandular enlargements, with the best effects, in promoting and hastening their cure; M. Ricord also adds his testimony in favour of this preparation. —*Gazette des Hôpitaux*, 1848. No. XIII.

334.—*Denial of the supposed Virtues of the Aristolochia Indica as a Remedy for the Bite of Venomous Snakes*—The Aristolochia serpentaria, or Virginian snake-root, formerly enjoyed the traditionary reputation of being able to cure the bite of the rattlesnake; but no authentic proof of its utility was ever advanced. Recently in India, another member of the same genus, the A. Indica, was alleged to possess remarkable powers as an antidote for the bite of all venomous snakes; but experiments on animals have demonstrated, in the most conclusive manner, that this assertion is untrue. It failed, in every instance, to retard even the fatal action of the poison. The plant was used in the form of the powdered root, either alone or mixed with black pepper (one of the prescribed modes of preparation), and as the juice of the leaves, carefully expressed. We give the details of one of the experiments. A full-sized dog was bitten in the scrotum by a large cobra de capella; in three and a half minutes the remedies were applied; the powdered root mixed with pepper was forced down his throat, along with the expressed juice of twelve leaves; and the juice with the fresh leaves were well rubbed on the external wound. The dog showed no symptoms of uneasiness for some time: after thirteen minutes his movements exhibited a slight languor; in another minute he lay down, vomited some of the Aristolochia, and was convulsed with spasms, which gradually became feebler; in seventeen minutes from the infliction of the bite, he was lying extended on his side, exhibiting only slight twitches; and, in five minutes more, he was quite dead.

[The medical gentlemen who maintain the efficacy of the antidote, found their opinion also on the results of experiments; and the writer of the article from which this notice is taken, supposes that they must have been performed with cobras, the poisonous fangs of which had been previously removed by the snake charmer. It is astonishing that they should have allowed themselves to be deceived by so common a trick, and which a comparative experiment, without the use of the supposed remedy, would have at once detected.]—*Overland Athenæum.* Madras, May 9, 1848.

335.—*Indian Hemp in Facial Neuralgia.*—Dr Rahman, of Potsdam, has made several trials of the *Cannabis Indica*, in cases of facial neuralgia, with very satisfactory results. In more than thirty cases great benefit was experienced, and many were entirely cured. Very delicate persons were seized with a little giddiness, lassitude in the limbs, &c.; others were affected in an opposite manner, and evinced great excitement, mirth, and vivacity; but these symptoms disappeared after an hour or two, and left no unpleasant sensation behind them. The dose was from sixteen to twenty drops of the tincture, containing about one grain of the resinous extract.—*Medical Times.*

336.—*Emollient Drinks in Lead Colic.* By M. Martin Solon.—The author submitted twenty-two patients to the free use of emollient drinks, with emollient enemata twice daily. All were cured by this simple treatment in from six to fourteen days.—*L'Union Médicale*, June 15, 1848.

[The duration of the "traitement de la Charité," which consists in active purgation, is from six to eight days.]

337.—*New Method of preparing Copaiva.* By M. Lobel-André.—M. Lobel-André has submitted to the Academy of Medicine at Paris a new mode of preparing copaiva, which guarantees the purity of the substance, and offers a more certain mode of cure. This method consists in the saponification of the resin of the balsam of copaiva. The resin, in itself indigestible, becomes saponified, and holds in solution the volatile oil. By this method, none of the constituents of the balsam are eliminated, but are all rendered completely assimilable. The experiments made by M. Lobel-André himself, and several other practitioners, leave no doubt of the relative advantages of this method, by which, moreover, all pains in the epigastrium, malaise, eructation, and vomitings are avoided.—*Gazette Médicale;* and *Brit. and For. Med. Chir. Review*, No. 3, July 1848, p. 271.

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

VOL. I. SEPTEMBER, 1848. No. VIII.

I.—MEDICAL PHYSICS, CHEMISTRY, AND NATURAL HISTORY.

338.—*Researches on Endosmose.* By PH. JOLLY.—This paper enters into a very full consideration of the whole subject of endosmose, and commences with a criticism of the methods hitherto employed for its measurement, in which the author shows that the indications of Dutrochet's Endosmometer are imperfect, and liable to be affected by a variety of different errors. In order to avoid these, the author has contrived a new method of measuring the amount of endosmose. For this purpose he employs a small tube from about three-fourths of an inch to an inch in diameter, over the one end of which a piece of pig's bladder is tightly tied. The bladder is then introduced for some time into spirit of wine, by which treatment it is enabled to resist putrefaction for a longer time than it does when unprepared. The substance whose diffusion is to be measured, is then brought into the tube either in the dry state or in solution, in a known quantity of water, the whole is then weighed, and the covered end of the tube inserted about a line under the surface of water in a vessel containing about four pints; the water in which is frequently changed during the course of the experiment. The tube is then weighed at definite intervals, and the weight is found to increase at first rapidly and afterwards more and more slowly, until at length, in place of increasing, a slight diminution begins to make its appearance. The experiment is then at an end: the whole of the substance introduced into the tube has disappeared, and nothing but water remains. The small diminution noticed at the end still continues, and is proved by the author to depend upon evaporation from the surface, the amount of which is determined in each experiment by the loss of weight in a tube of exactly similar form containing water only. The experiments have shown that this complete diffusion of different substances takes place in very different time, the gain in weight being with some at an end in a few hours, while with others it goes on increasing during several days. It is further proved that the weight of water which, so to speak, replaces the different substances is constant, especially if the same piece of bladder have been employed, whether the substance have been employed in the dry state or in solution in different amounts of water. The quantity of water which replaces a unit of the diffused substance, the author calls the endosmotic equivalent, and the following table contains the results of his experiments. The number placed before each refers to the piece of bladder employed in the experiment.

		Endosmotic Equivalent.
1.	Common Salt,	4·316.
1.	„	4·58.
2.	„	3·991.
2.	„	3·820.
10.	„	4·352.
11.	„	4·092.
5.	Sulphate of Soda,	12·44.
7.	„	12·023.
7.	„	11·033.
6.	„	11·066.
1.	„	11·581.
1.	Sulphate of Potass,	11·42.
2.	„	12·65.
4.	„	12·76.
5.	Sulphate of Magnesia,	11·503.
6.	„	11·802.
6.	Sulphate of Copper,	9·564.
9.	Bisulphate of Potash,	2·345.
3.	Sulphuric Acid,	0·391.
5.	„	0·308.
7.	Hydrate of Potass,	200·09.
1.	„	231·4.
6.	Alcohol,	4·140.
8.	„	4·132.
4.	„	4·336.
6.	Sugar,	7·250.
7.	„	7·064.
5.	Gum,	11·79 (?).

The author also gives a series of

experiments from which he draws the conclusion, that the quantity of any substance passing through a membrane in a unit of time is proportional to the density of the fluid. Some observations are also made which tend to show that the endosmotic equivalent increases with the temperature, at least this is generally the case, though common salt appears to be an exception to the rule. The paper concludes with a discussion of the physical cause of endosmose, for which we refer our readers to the original.—Henle und Pfeufer's *Zeitschrift für Rationelle Medizin*, Vol. 7, p. 83.

339.—*Heating Power of Low Charges of Electricity.*—In a lecture delivered at the Royal Institution, Mr Faraday demonstrated by a simple experiment, that coal-gas might be ignited by a very feeble electric spark. He insulated on a glass stand a globular iron vessel containing the condensed gas. He then applied to it, twice, a glass tube which had been each time rubbed with a hare-skin. On applying the point of the forefinger near to the mouth of the jet from which the gas was escaping, the small spark which escaped was sufficient to ignite the gas. —*Medical Times*, July 1, 1848.

340.—*Absorption of Carbonic Acid by Sulphuric Acid.*—In our February number we inserted a notice of an observation by Professor Rodgers, that sulphuric acid was capable of absorbing 94 per cent of carbonic acid. That notice has since been copied from our journal into the pages of the *Chemical Gazette*, and has called forth communications from Messrs Noad and Morley, whose experiments concur in refuting the statements of the American chemist. Mr Morley passed a current of dry carbonic acid gas for an hour through sulphuric acid, and found that at the 340 of that time it had not gained in weight.—*Chemical Gazette*, Nos. 133 and 136.

341.—*Method of detecting Minute Quantities of Opium.* By M. HENSLER.—This method is founded on the reddish-purple colour, which porphyroxine gives when heated with dilute hydrochloric acid. In order to employ it, the substance to be tested is mixed with a little potash, and agitated with ether. A piece of bibulous paper is dipped several times in the etherial solution, allowing it to dry between each immersion. It is then moistened with dilute hydrochloric acid, and exposed to the vapour of water, when it acquires a red colour more or less intense, according to the quantity of opium present.—*L'Union Médicale*, June 24, 1848.

[M. H.'s experiments appear to have been confined to the detection of opium in mixed medicines; it is not stated whether the test is applicable to medico-legal cases, but it is not improbable that it may be so.]

342.—*New Organic Base in Opium.* By Dr G. MERCK.—The author, in the examination of a quantity of opium residues from the manufactory of M. Merck of Darmstadt, has detected a new base, for which he purposes the name of papaverine. Papaverine crystallizes in groups of pointed crystals from its spirituous solution. It is sparingly soluble in cold alcohol and ether, but much more so in these menstrua at the boiling temperature. It is insoluble in water. It scarcely affects reddened litmus paper; with sulphuric acid it gives a blue colour. The salts of papaverine are for the most part sparingly soluble in water, and the hydrochlorate is especially remarkable for the facility with which it crystallizes. It is obtained in right-rhombic prisms, the angles of which are 80° and 100°. The sulphate and nitrate are also readily crystallizable. With bichloride of platinum it gives a double salt in the form of a yellow powder, insoluble in water and alcohol. The analyses of Dr Merck establish the following as the formulæ of the base and its compounds:—

Papaverine, - - $C_{40}H_{21}NO_8$.
Hydrochlorate, $C_{40}H_{21}NO_8+HCl$.
Platinum Salt, $C_{40}H_{21}NO_8,HCl_1P+Cl_2$.
—*Annalen der Chem. und Pharm.*, April 1848.

343.—*Creatine, a Constituent of Human Flesh.* By Dr SCHLOSSBERGER.—The existence of creatine in human flesh not having been yet ascertained, although it is found in the urine, the author treated six pounds of human flesh by the usual process, and extracted from it a quantity of creatine, amounting in all to about two grammes, a proportion approximating very closely to that obtained by Liebig for the quantity existing in ox and horse flesh. Dr Schlossberger did not obtain the slightest trace of inosinic acid in this experiment. —*Annalen der Chem. und Pharm.*, April 1848.

344.—*Chemical Constitution of Cholesterine.* By Dr ZWENGER. — The per centage composition of cholesterine has been determined by various analysts, but no attempt has hitherto been made to ascertain its true formula, which can only be done by the study of its products of

decomposition. When cholesterine is treated with sulphuric acid, it loses its crystalline character, becomes of a reddish colour, and is then converted into a mixture of three different carbo-hydrogens, to which the author gives the common name of cholesteriline, and distinguishes by the letters *a*, *b*, and *c*. The three substances are separated from one another by ether, which leaves a cholesteriline undissolved, and the ether on evaporation deposits a cholesteriline in crystals, while the third remains in the mother liquor. The analysis of these three substances gave the following results :—

	a Cholesteriline.	*b* Cholesteriline.	*c* Cholesteriline.
Carbon,	88·05	88·29	87·92
Hydrogen,	12·09	12·18	11·99
	100·00	100·00	100·00

These analyses lie within the limits of the error of experiment in several analyses of the same substance, and the carbo-hydrogens might therefore be assumed to be polymeric bodies, and that one only was first formed, and then by the further action of sulphuric acid partially converted into the other two, exactly as occurs in many instances when sulphuric acid acts on carbo-hydrogens. The author, however, has observed that these substances are always formed simultaneously, even when the sulphuric acid is caused to act so as to leave a quantity of cholesterine undecomposed. He considers it more likely, therefore, that their constitution is different, and gives to them respectively the following formulæ:—$C_{52} H_{36}$, $C_{52} H_{18}$, $C_{27} H_{22}$. From the previous analyses of cholesterine, he deduces for that substance the formula $C_{21} H_{66} O_3$. The action of sulphuric acid consists, then, simply in removing 3HO when the three carbo-hydrogens are simultaneously produced; thus :—

$$C_{21} H_{66} O_3 - 3HO = C_{52} H_{36} + C_{52} H_{18} + C_{27} H_{22}.$$

—*Annalen der Chim. und Pharm.* April 1848.

[The formula of cholesterine, as well as those of the three carbo-hydrogens above given, appear to us of a very questionable nature. It is more probable that the three substances described by the author are in reality polymeric, and their analyses tally sufficiently well with the formula $C_{20} H_{64}$, which would bring them into the same class with oil of turpentine, and the other $C_{10} H_8$ oils. Cholesterine would then be represented by the formula—$C_{20} H_{67} O_3$, which comes very close to the results of the analyses of Marchand, Schwendler, and Meissner.]

345.—*On the Fatty Acids of Castor Oil.* By M. Saalmuller.—Castor oil was investigated by Bussy and Lecanu, who obtained from it a solid acid, which they called margaritic acid, and two fluid acids, to which they gave the names of ricinic and elaiodic acids. It would appear from the researches of M. Saalmuller, that these chemists had in reality, under the name of margaritic acid, analysed a substance containing a considerable quantity of fixed alkali in union with a solid acid; but his experiments do not show clearly the constitution of this acid, which indeed would appear to differ in different quantities of the oil, as the results in one case agreed pretty nearly with the formula of stearic, in another with that of palmitic acid. The oily acid he has also found to be a uniform substance, and not a mixture of two, as Bussy and Lecanu supposed. He gives it the name of ricinoleic acid. This substance is prepared in a state of purity by a process identical with that of Gottlieb for the preparation of oleic acid. Ricinoleic acid is a pale yellow fluid of a syrupy consistence; specific gravity 0·94 at 59°. It has a disagreeable acrid taste, but no smell. It is soluble in all proportions in alcohol and ether. The alcoholic solution is acid to test-paper, and expels carbonic acid from the alkaline carbonates. When distilled ricinoleic acid is entirely decomposed, the first portions being very fluid, the latter very thick and oily; no sebacic acid is formed. Its salts are mostly crystallisable, and are not altered by exposure to the air. From his analysis the author deduces for this acid the formula $C_{36} H_{34} O_6$, and for its baryta salt $C_{36} H_{33} O_5 Ba O$. Boudet has stated that castor oil is converted into palmin by sulphurous acid in exactly the same manner as by nitrous acid. M. Saalmuller endeavoured to repeat this experiment, but without success.—*Annalen der Chimie und Pharmacie*, vol. 64. p. 108.

[M. Saalmuller's results do not agree with those of a recent investigation of ricinoleic acid by Svanberg and Kolmodin, who have obtained the formula $C_{36} H_{34} O_6$ for the acid, and $C_{36} H_{33} O_5 Ba O$ for the baryta salt. A formula of especial interest as the acid would then differ from oleic acid ($C_{36} H_{34} O_4$) in the amount of oxygen only. Neither of these formulæ admit of being brought into harmony with that of palmic acid, for which the researches of Playfair give $C_{34} H_{33} O_6$; and as the conversion of oleic into elaidic acid is known to be unattended by any change in constitution, we should naturally expect the passage

of ricinoleic into palmic acid to be of a similar character, which of course it cannot be if either of these researches is correct. The whole subject appears to require further investigation.]

346.—*On the Functions of the Air-sacs of Birds.* By M. SAPPEY.—In a work replete with interesting and elaborate anatomical details as to the structure of the respiratory organs in birds, M. Sappey brings forward entirely new views as to the functions of those remarkable reservoirs of respired air, which, it is well known, exist in all birds, and which are universally supposed at present to be accessory organs of respiration. The author denies that they have any relation to the aeration of the blood; his arguments are as follows:—If the blood were aerated in these reservoirs (*i. e.* in the systemic vessels), it would result that the venous and arterial blood would be similar in birds; whereas this is not the case, the difference being as great as in mammalia. The reservoirs are supplied with red arterial blood, directly from the aorta, which is returned into the vena cava; it is impossible to conceive that this blood, fresh from the heart and lungs, undergoes a second aeration in the reservoirs. Moreover, the mucous membrane of these reservoirs is of quite a different structure from that of the lungs, the latter being provided with great numbers of vessels, while the former is very little vascular. The air also which penetrates into the air-sacs is, according to M. Sappey, almost invariably a respired air.

The uses of the sacs the author conceives to be fourfold: 1*st*, to diminish the specific gravity of the animal; 2*d*, to render the equilibrium more stable; 3*d*, to render the respiration more independent of general muscular exertion than in mammalia; 4*th*, to give diffusiveness and strength to the voice. This last effect he ascribes exclusively to the diaphragmatic reservoirs.—*Gazette des Hôpitaux*, Aug. 5 and 10, 1848. (Analysis of a work "*Recherches sur l'Appareil Respiratoire des Oiseaux.*")

II.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

347.—*On the Nerves of the Liver.* By C. H. JONES, M.B.—The liver receives a pretty ample supply of nerves from various sources: branches of the left pneumogastric, branches from the semi-lunar ganglia, and some from the right phrenic, are usually described as entering the organ at the transverse fissure. Having entered the portal canals, they run in the areolar tissue which surrounds the vessels, and may be seen distinctly in great numbers when the coats of the vein are dissected off. By ordinary dissection they may be followed some distance along the portal canals, but nothing satisfactory can in this way be determined respecting their distribution and arrangement. By careful dissection, and removal of the coats of the vessels, which were treated with acetic acid and examined under a power of 200 diameters, Mr Jones has succeeded in tracing the nerves attached to the vessels of the liver further than has yet been done. His principal conclusions may be stated as follows:—1*st*, The nerves of the liver are almost exclusively composed of fibres of the kind termed by Henle *gelatinous;* a very few isolated tubular fibres are sometimes present. 2*d*, They are distributed along the whole of the vessels, and have a very complicated plexiform arrangement; and appear even in their minutest ramifications to be quite distinct from all the other tissues around them. The termination of the nerve-filaments appears to be in loops, but it is difficult to determine this point with certainty. 3*d*, The hepatic artery has a larger supply of nerves, in proportion to its size, than any other vessel; next in order follows the portal vein, and lastly the hepatic veins, which are very scantily supplied. The ducts also have but few nerves. 4*th*, The smaller hepatic arteries appear not to possess so many nerves as the larger; and it appears probable, that the nerves cease altogether with the circular fibres of the vessels. No nerves have been observed in the lobules. 5*th*, The organic nerves of the liver appear to consist of bands of a finely striated or granular material, in which elongated nuclei are set at intervals; and this basic substance has a tendency to divide longitudinally, although it is doubtful whether the so-called ultimate fibres are not the result of an artificial division.—*Medical Gazette*, July 14, 1848.

348.—*Ciliary Epithelium in Mammalia.*—It has been recently found that this variety of epithelium, besides lining the interior of the nasal cavity, and of the frontal and maxillary sinuses communicating with this cavity, is continued up the lachrymal canal into the lachrymal sac,

and is also spread over the mucous surface of both eyelids, but not over the conjunctiva covering the eye itself. From the posterior part of the nasal cavity, the ciliary epithelium passes to the upper part of the pharynx, which it lines to about opposite the lower border of the atlas: it is also spread over the posterior surface of the root of the soft palate, and latterly it is continued to the orifice of the Eustachian tube, up which canal it extends into the cavity of the tympanum.

It was until recently believed that the ciliary motion is entirely wanting in the urinary apparatus of Vertebrata. But it has been found by Mr Bowman, that in frogs a layer of ciliary epithelium lines the urinary tubules just at their junction with the Malpighian capsules; and this observation has been verified by Bischoff, Valentin, and others. Valentin was able to trace the ciliary motion even within the Malpighian capsules; so also was Pappenheim. In the kidneys of lizards, Kölliker states he has observed ciliary movements along the entire length of the urinary tubules, except at their exit from the gland, and just where they dilate into their terminal extremities within the substance of the organ. No trace of cilia has yet been found in any part of the urinary apparatus of Mammalia.

M. Rossignol finds that the ciliary epithelium along the mucous lining of the respiratory passages, ceases at the vesicular structure of the lung, its place in the vesicles themselves being occupied by simple pavement epithelium, composed of roundish or oval cells. The cessation of the ciliary epithelium at the commencement of the cellular structure of the lung, has been observed also by Mr Rainey, who states, however, that the intercellular passages and the air-vesicles in which the ultimate branches of the bronchial tubes terminate, are destitute of epithelium of any kind.

Ecker has discovered ciliary epithelium in the semicircular canals of the internal ear of Petromyzon marinus (sea lamprey). The cells were of different forms, oval, roundish, flask-shaped, and angular, with nuclei and granular contents. None of the cells possessed more than one cilium. The movements of the cilia were principally of a lashing, fanning kind. This is the first example of a ciliary structure being found in any other part of the auditory apparatus of a vertebrate animal, than the Eustachian tube.

Of the phenomena of ciliary motion.—An interesting observation in regard to the mode of action of the cilia, has been made by Mr Quekett in the case of the gill rays of the mussel, which explains more completely than could otherwise be done, the power possessed by the cilia of propelling fluid or solid particles in any determinate direction. He observed, that besides their ordinary lashing movements, each cilium possesses a kind of rotatory motion on itself, by which it turns on its own axis, through the space of about a quarter of a circle, with a movement very similar to that performed during the *feathering* of an oar in rowing.

Nature of the ciliary motion.—From experiments made on the epithelial cells of the nasal mucous membrane of man, E. H. Weber has shown that the vibratile movements of their cilia are diminished almost to one-half their usual rate by cold, and are sensibly increased by heat. In this, as well as in their rhythmic action and its persistence after death, the ciliary movements bear a close analogy to those of the heart. The influence of heat and cold is less manifest on the movements of the cilia, and also on those of the heart, in cold than in warm-blooded animals.—*Baly and Kirkes' Supplement to Müller's Physiology.*

349.—*On the Non-absorption of Narcotic Poisons by the Lymphatics.* By E. Welby Day, M.R.C.S., Birmingham.—Emmert (Meckel's *Archiv.* i. p. 176) tied the abdominal aorta of a dog, and into a wound of one foot introduced ferrocyanide of potassium, into a similar wound of the other decoction of nux vomica. The ferro-cyanide was absorbed and detected in the urine, but the nux vomica produced no poisonous effects. In another experiment, after tying the abdominal aorta, Emmert introduced prussic acid into a wound of the foot; after the lapse of seventy hours, no poisonous effects having presented themselves, the ligature was loosened, when symptoms of poisoning were observed in half an hour. These experiments were confirmed by Schnell and Schabel. Ségalas (Magendie's *Journ. de Physiol.* ii. p. 117), after tying the blood-vessels of a loop of intestine, and injecting half a drachm of solution of extract of nux vomica, observed no sign of poisoning after the lapse of an hour.

Opposed to these facts, we have an experiment by the Academy of Medicine of Philadelphia. After tying the vena portæ, nux vomica was injected into a loop of intestine; tetanus and death ensued in twenty-three minutes. Of this experiment it may be remarked, that it has been repeated by Mr Blake (Edin. Med. and Surg. Journ. vol. liii. p. 45) with opposite results, and that, admitting the

accuracy of the observation, it cannot be allowed that the poison was absorbed by the lacteals, for the communications which exist between the veins of the intestine and those to the vena cava, enable us to account otherwise for the result.

To account for the non-occurrence of poisoning under these circumstances, we are compelled to allow the truth of one of three propositions. 1st. The poison is altered and rendered inert in the lymphatics. 2d. It cannot enter them. 3d. Having entered, it cannot be conveyed by them.

The last of these views is that of Henle, who supposes that narcotic poisons, by suspending the contractility of the lymphatic vessels, deprive them of the power of propelling onwards their contents. This hypothesis appears to be borne out by the experiments of Behr (Henle's *Zeitschrift*, Heft 1, Bd. 1. p. 35), in which it is shown, that lymphatics placed under the influence of a narcotic poison, are disabled from conveying into the system not only the poisonous agent, but also inert solutions, which under normal conditions they absorb with facility. Behr's experiment consisted in tying the abdominal aorta of an animal, and introducing into a wound in one of the lower extremities 100 drops of solution of strychnia, mixed with 120 drops of solution of ferro-cyanide of potassium. The animal was killed after two hours and a half, without symptoms of poisoning; and neither in the urine, nor in the blood, could the ferro-cyanide be detected. In two out of six similar experiments, a mere trace of ferro-cyanide was found in the urine; in the rest none could be discovered.

The experiments of Bischoff (Henle's *Zeitschrift*, Band 4. Heft. 1, p. 62) are in some points opposed to the above. The strychnia was introduced into a wound in the thigh, the aorta having been tied in the abdomen. In one dog, symptoms of poisoning appeared in half an hour, and death took place in an hour and a quarter. Another showed no symptom of poisoning after two hours and three quarters; but on putting a further quantity of strychnia into the wound, poisonous effects became developed within half an hour. In two cases, in which ferro-cyanide of potassium was introduced into the same wound with the strychnia, it was found in the urine; and in one of these in the thoracic duct, but not in the blood. [Mr Day ascribes the result of these experiments to a collateral circulation having been established, the wounds being high in the limb; but the assertion in last sentence is almost conclusive against this view.]

With the view of procuring more unequivocal evidence with regard to Henle's view, Mr Day has performed three experiments on dogs. The abdominal aorta was tied in all, as in Behr's and Bischoff's experiments. In the *first* dog a solution of strychnia, followed by a solution of iodide of potassium, were inserted into a wound near the right hind foot. Into a similar wound in the opposite limb a solution of ferro-cyanide of potassium was inserted. The animal was killed after two hours and a half, no symptoms of poisoning having been observed. The urine gave, on adding persulphate of iron, a precipitate of Prussian blue, but no trace of iodine was discovered. In the *second* dog a mixture of hydrocyanic acid, with solution of ferro-cyanide of potassium, was inserted into the right hind leg, and a solution of sulpho-cyanide of potassium into the opposite limb. In two hours and a quarter the animal was killed, no symptom of poisoning having arisen. The urine, on being tested by persulphate of iron, gave the deep red colour of sulpho-cyanide of iron, but no trace of the ferro-cyanide. In the *third* experiment the same salts were used, but the sulpho-cyanide was inserted along with the hydrocyanic acid, and the ferro-cyanide into the opposite limb. The result was the presence of the ferro-cyanide in the urine, in which no trace of the sulpho-cyanide could be detected.—*Provincial Journal*, May 31, 1848.

[Mr Day concludes by adopting Henle's hypothesis. His experiments are well devised; but the reasoning against Bischoff's results is not conclusive, and we think that further trials are still necessary. In particular, the contents of the thoracic duct should always be examined.]

III.—PRACTICE OF MEDICINE.

350.—*On the Treatment of Eruptive Diseases of the Scalp.* By Dr J. MOORE NELIGAN.—The author arranges these diseases as follows:—1. Inflammatory, Herpes capitis, or true ringworm, Eczema capitis, Impetigo capitis, and Pityriasis capitis. 2. Non-inflammatory, Porrigo capitis, or the Porrigo favosa of other writers. This arrangement is preferred by Dr Neligan, as it lays the foundation

of a rational, in contradistinction to an empirical plan of treating these affections.

Dr Neligan gives an excellent description of the essential characters and differential diagnosis of the above diseases. His account of the herpetic origin of ringworm is particularly accurate, and he points out with justice the error into which Mr Erasmus Wilson has fallen in describing it as a disease not of the scalp, but of the hair itself, under the name of *Trichonosis furfuracea*. He omits to notice, however, the recently alleged parasitic nature of this affection, a view of its pathology which explains its undoubted contagious character.

"The prognosis to be given in any of these eruptions depends more on the length of time which the disease may have lasted, than on the exact variety which is present; the longer they have existed, the more inveterate and obstinate they are, as also the more liable to relapse after cure. When seen early, and submitted to judicious treatment, they are generally cured in from a fortnight to three weeks, and sometimes in a much shorter space of time; but in old standing cases the cure is rarely accomplished in less than from two to three months. With reference to the peculiar form of eruption, I have found the prognosis as to curability to be as follows:—1st, the scattered form of impetigo; 2d, pityriasis; 3d, the moist form of eczema; 4th, confluent impetigo; 5th, herpes; and 6th, the dry form of eczema.

"As respects the first group of eruptive diseases of the scalp, two principles must, I conceive, be laid down, to enable their treatment to be based on rational, and not on empirical, principles: first, that they are inflammatory, and, secondly, that they are constitutional affections. That they are inflammatory is sufficiently proved by the preceding and attendant inflammation with which they are all accompanied, and by the character of the same eruptions when they occur on other parts of the cuticular surface. That they are constitutional diseases is proved chiefly by the great advantage derived from their treatment by the administration of internal alterative medicines."

As a general rule, Dr N. never allows the head to be shaved, on account of the irritation thus produced; but directs the hair to be cut close with a sharp pair of scissors, and to be kept cut as closely as possible while the least trace of eruption remains. For the same reason, the use of a comb or hard brush is not permitted; the softest hair-brush may be used, if necessary.

The scabs having been removed by a poultice or ointment, composed of from twenty grains to half a drachm of the carbonates of potash or soda to the ounce of lard, is applied three times daily, being lightly smeared over the eruption. It is washed off with an alkaline lotion (prepared by dissolving from half a drachm to a drachm of the carbonate of soda or potash in a pint of water) every morning previous to the first application for the day.

The internal treatment consists in the exhibition of the yellow iodide of mercury, in combination with hydrargyrum cum cretâ, and aromatic powder, in the following doses. To a child six years old, half a grain of the yellow iodide of mercury, two grains of hydrargyrum cum cretâ, and two grains of aromatic powder, every second morning; for an older child, the same quantity every morning; and for a younger child only every third or fourth morning. In all cases the child is kept strictly on milk diet during the entire treatment.

"Such is an outline of the plan of treatment I have now employed for more than six years in this obstinate class of diseases, with almost uniform success, both as regards rapidity and completeness of cure. Some cases, of course, prove more rebellious than others, but I have met very few which resisted for so long as three months the remedies I have mentioned, when carefully and perseveringly employed."—*Dublin Journal*, August 1848.

[The cold water douche constitutes, according to our experience, the most effectual means of carrying out the local sedative treatment so justly insisted on by Dr Neligan. Acute eczema capitis is rapidly cured by its agency. It should be employed daily, in the morning or at mid-day, not at bed-time, and its use should be continued on each occasion from five to twenty minutes. Cold water cloths should also be applied more or less constantly during the day. The water may be as cold as the patient can bear it. When the eczema is of long standing, and the integuments are much thickened, recourse must be had to other means, the most important of which is a solution of corrosive sublimate, in the proportion of from half a drachm to two drachms to the pound of water. When the disease is extensively spread over the body, the same remedy may be used with perfect safety in the form of bath—(See *Monthly Retrospect*, p. 98.)]

351.—*On Baldness and its Treatment.* By M. Cazenave.—An intimate know-

ledge of the structure and development of the hair, is essential to a correct appreciation of the mode of action of the numerous causes of baldness. These may be arranged under three heads: (*a*) those which cause atrophy of the bulb; (*b*) those which suspend the secretion of the hair; and (*c*) those pertaining to disease of the hair-follicle, or of the skin from which the hairs grow.

To the first class of causes, are referred *congenital* and *senile alopecia;* the first rarely general over the body, and the second affecting more especially the superior and anterior parts of the head.

The most common alopecias, and on account of which the physician is most frequently consulted, are those originating in a simple default of secretion of the hair, there being no atrophy of the bulb. The baldness so often occurring after certain fevers, small-pox, during phthisis, and convalescence from severe diseases, is of this kind. We must attribute to the same cause, the baldness appearing suddenly as the effect of extreme exhaustion of body or mind, or of intense moral emotion. This head includes, moreover, two forms of alopecia, arising respectively from *Syphilis*, and *Porrigo decalvans*.

By syphilitic alopecia, M. Cazenave understands baldness arising in the course of the venereal complaint, without previous disease of the skin of the affected part. He maintains, and justly, that it is due to the syphilitic poison, and not, as some have averred, to the mercury exhibited to counteract its effect, having frequently seen it in those who had never taken that drug.

The Porrigo decalvans (Alopecia circumscripta) is characterised by more or less circular spots on various parts of the head, entirely deprived of hair, and presenting a white and polished surface. Without previous heat or itching, the hairs gradually fall, until a circumscribed portion of skin is left quite bare. The principal seat of this disease is the back part of the head, the temples, and behind the ears. It occurs at all ages; but is rare in infancy, and is more common in women than men. Its duration extends over a considerable period, never less than several months. As the cure approaches, the spot acquires a redder colour, a light down first appears, and gradually the hair assumes its normal strength and colour.

The third group of alopecias includes, first, those arising from disease of the hair-follicle, as in the baldness following eczema, impetigo, and erysipelas, the cutaneous inflammation of which is propagated to the follicle, and affects the secretion of the hair. The loss of hair consequent on these diseases is not persistent, although the hair rarely recovers its normal thickness. This is more especially the case after obstinate impetiginous eruptions.

In the *Porrigo favosa*, there is no destruction of the hair bulb, but the exit of the hair from the skin is prevented. The hair is twisted and folded on itself, and the bulb from which it grows becomes gradually atrophied. Hence the persistence of baldness originating in this disease.

The secreting apparatus remaining intact, alopecia may arise from a kind of mechanical destruction of the hair, after its escape from the surface of the skin. It is in this manner that is produced the baldness accompanying lepra, and psoriasis of the hairy scalp. But the most common sources of baldness, occasioned in this way, are pityriasis and ringworm.

Pityriasis or dandriff is the most frequent cause of baldness in women, and consists in a more or less abundant furfaraceous desquamation. The hair, surrounded and compressed at its exit by cuticular scales, becomes dry, readily breaks, and falls off. The efforts made to remove the disease usually increase the loss of hair, and this simple affection may in the female become the source of most poignant grief. According to our author, the cuticular exfoliation of ringworm destroys the hair in the same manner.

Treatment of Baldness.— Congenital and senile alopecia, as also that arising from favus, are considered by the author to be incurable. In baldness arising from default of secretion, ringworm, or pityriasis, on the contrary, the hair may be restored as strong and thick as before; but not so in syphilitic alopecia, where the restoration is less perfect.

As a local application M. Cazenave recommends an ointment made of beef marrow, 30 grms.; tincture of cantharides, cloves, and cannella, of each 1 grm.

This is applied night and morning, the part having been previously washed with salt water. Repeated shaving and dry rubbing are also very advantageous. When general debility is present, sulphurous baths, with tonics and full diet are indicated. In *Pityriasis capitis* it is recommended to interrupt for a time the dressing of the head, and to wash frequently with weak alkaline and emollient lotions. With this treatment an occasional purgative, and the daily use of the warm bath, may be beneficially con-

joined.—*L'Union Méd.* Nos. 91 and 92, 1848.

352.—*Partial Leucopathia.* By MM. RAYER and ROGNETTA.—This affection consists in the presence of white spots of various size occurring on the surface of the body. They are seen most frequently on the face, hands, back, and scrotum, and constitute a very unpleasant deformity when seated on uncovered regions. They are more prominent when they exist in the middle of the beard, or on the hairy scalp, as the hair growing from the affected part participates in the white colour. The spots are equally sensible with the surrounding integuments, and are not the seat of any morbid sensation. They are very smooth, and somewhat below the level of the skin. According to M. Rognetta, their vascularity is diminished, and the dermoid papillæ have lost their normal prominence.

M. Rayer has been often consulted on account of this affection by Brazilians, in whom, from the normal colour of their skin, it constitutes a shocking deformity. A blister, accurately adapted to the diseased part, has formed, in his hands, the most successful treatment; the spot becomes less apparent, or disappears completely, in virtue of the coloration that the vesicatory leaves naturally on the skin. —*Annales de Thérapeutique*, Vol. VI. p. 59.

[It is not mentioned whether the improvement is of a permanent character; we fear that it will gradually disappear, as in the case of other blister marks. It has been proposed to tattoo these spots, and, if done skilfully, we see no objection to this plan of treatment.]

353.—*Case of Hydatid Disease of the Liver cured by Operation.* By Dr REES. —The patient was a man, aged thirty-one; admitted into Guy's Hospital on the 13th of October 1847. Examination of his abdomen detected a distinct tumour, occupying the right hypochondriac and epigastric regions. Fluctuation could be felt. On the 4th of December the tumour was tapped by Mr Hilton, with a trocar and canula not larger than an ordinary exploring needle, straps of plaster having previously been passed round the body, so as to fix the tumour in position, and to exert pressure upwards. Thirty-eight ounces of clear fluid were removed. The wound quickly closed. On the 7th of January, the tapping was repeated with the same instrument, and with the same precautions, as before. On this occasion, pus of a very offensive odour escaped, and only ten ounces were obtained, owing to the canula becoming obstructed. On the 9th of January the tumour was tapped a third time with a full-sized trocar and canula, an elastic gum-tube being passed through the canula. Twenty-four ounces of fœtid pus escaped, with membranous flakes, and partially destroyed hydatids. The opening was maintained, and fœtid pus, with occasionally hydatids, continued to be discharged (the capacity of the sac at the same time diminishing) till the commencement of April. On the 11th of April the discharging orifice had closed, and there remained only a body about the size of a walnut, below the right lobe of the liver.—*Royal Med. Chir. Soc. Meeting, London.*

354.—*Case of Hydatids within the Cranium, giving rise to some singular Phenomena.* By Dr STEWART. (Communicated to the Medico-Chirurgical Society, London, by Dr GREGORY).—In the first portion of this paper, Dr Gregory remarks on the greater rarity of acephalocysts, or hydatids, in the intra-cranial structures than in the thoracic or abdominal tissues, and he refers to Dr Craigie's observation that in the greater number of recorded cases only solitary serous cysts existed, not clustered hydatids. After noticing briefly three cases, one described by Rendtorff, a second related by Mr Mowatt of Worthing, in the second volume of the Medico-Chirurgical Transactions, and the third communicated by Mr Burnell to the late Dr Baillie, who remarked that none such had ever fallen under his own observation, Dr Gregory states, as the result of his reading, that the normal series of symptoms flowing from the development of intra-cranial hydatids seem to be the following:—Pain in the head, succeeded, after a considerable time, by epileptic fits, and terminating in apoplexy. The Pathological Museum of the Army Medical Department at Fort Pitt, Chatham, contains two specimens of hydatids of the brain. An account of all that is known relative to these cases has been furnished to Dr Gregory by Dr French. In the first case no cerebral symptoms were noticed during life. After death, cysts, described as hydatids, were found beneath the pia mater, covering the hemispheres, in the right corpus striatum, and in the substance of the cerebrum in its immediate vicinity. In the second case, epileptic fits were present for three years and five months before death. Here were found small round bodies, like hydatids, some hard and almost cartilaginous, not only

beneath the pia mater, but also generally throughout the substance of both the cerebrum and cerebellum. They were collected to the amount of an ounce or more. Each consisted of a distinct membranous sac, which sometimes appeared double, and in layers like an onion. All the cysts contained a clear fluid, with more or less cheesy-looking matter. Dr Gregory then communicates the following case, which, at his request, had been transmitted to him by Dr Stewart:—The patient, a gunner of the Royal Artillery, aged twenty-four years and nine months, was admitted into the Artillery Hospital Woolwich, on the 29th April 1848, immediately on his arrival from Malta, with the following history:—He had arrived in Malta with his company in February 1847, and from that time suffered from constant headache. In November 1847, he had a severe epileptic fit, followed by coma. Subsequently imbecility showed itself, and his vision became impaired, the pupils being sluggish, and the left eyelid affected with slight ptosis. His memory became defective, and he became subject to immoderate and uncontrollable fits of laughter when spoken to. When he arrived at Woolwich, he still presented the last-mentioned most remarkable symptom. His hearing was little affected, but both eyes were amaurotic; he staggered in his gait like a drunken man, and the expression of his countenance was idiotic. On the 22d of May, a large piece of meat which he had attempted to swallow stuck fast in the œsophagus, and he was only saved from suffocation by tracheotomy. A few hours afterwards, epileptic fits ensued, and were followed by coma, in which he died on the following morning. On examining the body, there was found in the middle fossa of the base of the cranium, between the cranial bones and the dura mater, a mass, the size of a closed fist, which proved to be a nest of hydatids. The hydatids were very numerous, and varied in size from that of a large pea to the dimensions of a small orange. The contiguous bones were roughened. The substance of the brain, which, together with the dura mater, was pressed towards the right side, presented no abnormal appearances. The lateral ventricles were filled with a clear fluid.

355.—*Paralysis of the Tongue from Passion.*—A man, aged fifty-nine, of delicate constitution and choleric temperament, while engaged in a dispute, suddenly lost the power of articulation. This was found to proceed from inability to move the tongue freely; no cerebral or other important symptoms were present. The faculty of speech returned, after five days, under the use of electricity from five to ten minutes daily.—*Journal of Psychological Medicine*, No. 2; and *Medizinische Zeitung*.

356.—*Paralysis from a Stroke of Lightning cured by Galvanism.* By R. ORTON.—A blacksmith was in the act of putting coals on the fire with a long iron shovel; this seems to have attracted the electric fluid, which passed up the arm, and discharged itself through the body. The consequence was immediate and complete paralysis of the right arm and hand. Motion and sensation were both lost. The limb continued in the same condition for three days, when the patient applied to Mr Orton. Moderate electric shocks were passed through the arm, *from* the shoulder *to* the hand, with immediate improvement; and after a second application on the evening of the same day, the power of motion and sensibility of the limb were completely restored.—*Med. Times*, July 1848.

357.—*On the Antagonism between Intermittent Fever and Phthisis.* By MM. DOROTEA and RENZI.—This memoir comprises a number of detailed reports by physicians inhabiting localities where intermittent fever prevails endemically, in answer to a request on the part of the authors, that they would state whether phthisis and scrofula were rarely presented to their observation. All the replies show that there is no correct foundation for the doctrine of antagonism between phthisis and intermittent fever.—*Il Filiatre Sebazio. Gaz. Méd., Paris*, No. 31, 1848.

358.—*Opening of the Ranine Veins in Angina.* By M. CEGLIE.—M. Ceglie has derived much advantage from this mode of bleeding in diseases of the throat. He explains the success by reference to the anatomical distribution of the blood-vessels. He has seen it afford great relief in the acute stages of inflammatory croup, the symptoms of oppression, the agitation, suffocative cough, &c., ceasing almost instantaneously.

To perform the operation, the tongue is drawn forward, and after puncturing the veins, the mouth is frequently gargled with warm water. The bleeding may be repeated three or four times in twenty-four hours.—*Gazetta Toscana delle Scienze Medicofiseche*, and *Prov. Journal*, Aug. 9.

359.—*Alkalis in Diabetes.* By M.

MIALHE.—The author relates the case of a gentleman, who, during the great heat of 1847, in consequence of an excessive use of acid drinks, suddenly presented all the symptoms of diabetes. The urine showed a density of 1040, and gave with caustic potass and heat a very dark purplish yellow colour, indicating the presence of a large quantity of sugar. The acid drinks were discontinued, and he was ordered to take in the twenty-four hours, five drachms of bicarbonate of soda, one drachm fifteen grains of calcined magnesia, and two bottles of Vichy water. Next day the urine presented a density of 1026, and contained no sugar. The alkaline treatment was continued for several days; there was no return of the diabetic symptoms.—*Académie de Médecine*, Paris, *Gaz. Méd.* No. 31, 1848.

360.—*Medical Diseases consequent on the Events of the Revolution in Paris.*—[The recent events in the French capital have afforded an ample field for observing the effects, and the results of treatment of surgical injuries. These have been so numerous as almost to exclude medical cases from admission into the public hospitals, although of these also there has been a great increase during the last few months.]

Among the morbid affections which have arisen in consequence of the forced marches, bivouacking in the open air, irregular diet, and excessive fatigue to which the French troops and *garde mobile* have been exposed during the last month, the most prominent has been a low fever, characterised by extreme lassitude, severe pains in the lower limbs, foul tongue, and complete anorexia, with the other symptoms which usually accompany a febrile condition of the system. Though somewhat grave in appearance, this fever has been readily cured by appropriate treatment. Sulphate of quinine in small doses, and acidulous drinks were employed with advantage at the Val de Grace.

Articular and muscular rheumatism have been very frequent. They were generally of a mild character; and in the wards of M. Champouillon at the Val de Grace, the removal of the complaint was readily obtained by local hydropathic applications.

The most serious disease to which the events of the revolution has given rise is *cerebral menengitis*, the fatal effects of which, during the month of March, have not been forgotten. During the past month, many have fallen victims to this disease, which has its origin in the combined effects of fatigue, moral excitement, and intoxication.

[We postpone a detailed description of this affection, until the appearance of a memoir on the subject promised by M. Levy.]—*Gaz. des Hôp.*, Aug. 3.

IV.—PRACTICE OF SURGERY.

361.—*The Question of Amputation in Gunshot Wounds.* By M. MALGAIGNE.—This question has formed the subject of a most interesting debate in the Academy of Medicine, Paris. MM. Roux and Baudens having concluded their communications,

M. Malgaigne observed, that the point towards which it was more especially his desire to call the attention of the Academy, was the treatment of fractures of the femur by war projectiles. It was a generally received opinion, more particularly promulgated by military surgeons, that such fractures required amputation. This was the practice of Ravaton, one of our great military authorities; Larrey, less exclusive than his predecessor, thought the extremity might be still preserved when the shot had only occasioned a simple fracture of the lower fourth or even third of the femur; but that all fractures occurring higher, in consequence of a gunshot wound, absolutely required amputation. M. Malgaigne then recalled the opinion of Ribes, who inclined towards considering all injuries of the femur, occasioned by musket balls, as cases of amputation. M. Malgaigne himself had adopted at one time this mode of thinking, and had applied it upon a field of battle; but the results were most unsatisfactory, and in the Polish campaign he had lost all the cases of amputation performed upon the thigh after gunshot wounds. On his return to France, M. Malgaigne had endeavoured to explain to himself this frightful mortality; and, on reading over the memoirs of M. Ribes, he was struck with an important fact, which that author honestly acknowledged:—"Out of 4000 invalided soldiers," said M. Ribes, "he had not found a single case of injury of the femur by shot. This was a proof, in his opinion, that all the men who had suffered from such wounds had died." But, on the other hand, amongst these 4000 cases, M. Ribes had not found a single case of amputation of the thigh a

fact which proved to M. Malgaigne that all these operations had been fatal, and that amputation did not afford more chances of preserving the lives of the wounded than the opposite practice.

On inquiring further into the details of the question, M. Malgaigne had arrived at this conclusion, that the same doubts might with justice be applied to all amputations performed in the treatment of injuries by war projectiles.

The question of immediate amputation might be said to be one of the most important points of modern surgery. In the ancient Academy of Surgery it was the object of a long debate; and Boucher had said that two-thirds of the cases of amputation terminated fatally.

After Fontenoy, out of 300 cases, Faure asserted that only thirty or forty were cured.

Bilguez states that, during the seven years' war, scarcely one or two cases had been saved out of numberless operations.

On the other hand, M. Malgaigne would lay before the Academy more recent statistics of a very different tendency.

Fercoq said that, of 60 primary amputation, only 2 cases did not recover, *i. e.*, 1 out of 30.

Percy was not quite so fortunate; of 92 amputations of the leg, thigh, and arm, 6 cases died, *i. e.*, 1 out of 15.

Guthrie, at New Orleans, performed 45 immediate amputations, 7 cases terminated fatally—1 out of 7; at the battle of Toulouse, 47 amputations, 9 deaths—1 out of 5.

The English forces during the Spanish war presented 291 amputations, 24 deaths —1 out of 8.

Del Signore, at Navarino, 31 amputations—1 death.

The English surgeons at Aboukir and Camfordomer reported 30 amputations; all were successful.

Larrey, on the 27th and 29th Brumaire, 13 amputations—2 deaths.

M. Malgaigne had further drawn up a list of the amputations performed in the hospitals of Paris, for traumatic lesions, during a period of ten years—from 1836 to 1846. These statistics were instructive. 165 amputations had been performed upon men, and 17 upon women. The mortality had been 107 for the former, and 10 for the latter. How were these amputations subdivided? The following was their classification for the men:—

	Amputations.	Deaths.	
Thigh,	44	34	over 3-4
Leg,	67	42	near 2-3
Foot,	8	5	over 1-2
Shoulder,	7	7	
Arm,	29	17	nearly 2-3
Forearm,	10	2	„ 1-5

Thus, in Paris, in the best hospitals, under the care of the first surgeons in the world (!), the average mortality of primary amputations was equal to two-thirds of the cases.

These were certainly unexpected results, and must, doubtless, cast some doubts upon the numerous successes which had been previously enumerated.

Circumscribing the question to narrow limits, *i. e.*, to the results of amputation in fractures of the thigh or leg, M. Malgaigne could bring forward an equally important document. In 1830, Dupuytren had under his care 13 fractures of the thigh in which he did not operate; 5 cases cured, 7 died, another was operated at a later period, and proved fatal.

In fractures of the knee or leg, Dupuytren performed 5 primary amputations of the thigh, 3 patients died; 4 secondary amputations, 4 deaths.

For the other fractures of the leg, in which the same surgeon did not amputate, 14 were fractures of both bones, 8 died; 2 of the tibia, 1 death; 2 of the fibula, 1 death. He performed two primary amputations of the leg: both cases terminated fatally.

Such were (continued M. Malgaigne) the precise documents existing in science; they tended to prove that the opinion of military surgeons, relative to the advantageous results of primary amputations, did not rest upon a very solid basis.

The following general conclusion might be adopted, viz., that, in attempting to preserve the limbs of the wounded, the surgeon did not cause them to incur any greater risks than if amputation were performed.

All these considerations had greatly modified M. Malgaigne's opinions on the subject, and had changed his practice in similar cases.

The events of June had furnished him with a melancholy occasion of verifying again the correctness of his newly adopted views; and this led him to expose before the Academy the results he had obtained at the Hôpital Saint Louis, in a service where an enormous number of wounded had been admitted.

He would acknowledge at once, that in some wounds all debate about the propriety of amputation should be set aside; thus in gunshot wounds of the hip or knee joints the operation was evidently unavoidable. These cases excluded, the following had been the result of the

fractures, in which M. Malgaigne had refrained from amputation :—

5 fractures of the thigh ...	2 recovered.	2 deaths	1 secondary amput.
6 fractures of the leg	2 doing very well	4 deaths	
2 fractures of the tibia.....	2 ditto		
4 fractures of the fibula...	2 ditto	2 deaths	
3 fractures of the arm.....	1 recovered	2 deaths	
5 fractures of the forearm	5 ditto		
2 fractures of the metacarp.	1 doing very well	1 death	
27	15	11	1

M. Malgaigne had performed only one primary amputation, which he was almost ashamed to acknowledge, after the energetic reprobation of which it had been the object from M. Roux, an amputation of the elbow. It might be pleaded in extenuation that the patient had recovered. M. Malgaigne would acknowledge he did not understand M. Roux's motives for proscribing this operation.

Thus, out of 17 fractures of the thigh and leg treated without operation, 8 cures had been obtained. Dupuytren, out of 31, had obtained 13 recoveries. M. Malgaigne's results were, therefore, more satisfactory than those of M. Boucher, who considered that primary operations sacrificed the lives of two-thirds of the patients.

M. Gosselin, Dr Malgaigne's colleague at Saint Louis, had also abstained from operations. The following were his results :—

3 fractures of the thigh...	1 gives hope	2 deaths	
3 fractures of the leg.....	1 uncertain	2 deaths	
4 fractures of the tibio-tarsal joint	1 doing well	1 death	2 secondary amput.
2 fractures of the shoulder	2 ditto		
2 fractures of the arm.....	2 ditto		
3 fractures of the elbow...	1 uncertain	2 sec. amput.	2 deaths
8 fractures of the forearm	8 well		
25	16 cases of success.		

The difference of the mortality amongst the insurgents and soldiers had been as follows :—

Out of 17 fractures of thigh and leg—

5 insurgents	4 deaths	1 recovery (fract. of the thigh)	
12 soldiers.....	4 deaths	7 doing well	1 amput. cured.

This considerable mortality amongst the insurgents depended in some measure, of course, upon the moral depression consequent upon their defeat, but also upon the interrogations which those unfortunate men were submitted to, without the authorization of the surgeons to whose care they were confided.

These satisfactory results were due (said M. Malgaigne) to various causes, amongst which it was only fair to place the special treatment employed. He avoided, as much as possible, all scarifications and incisions, employed only the simplest dressings, and gave food to the patients as soon as any appetite was present. With regard to venesection, he scarcely ever employed it; being a pupil of Broussais, he formerly recommended the practice, but had been deterred from its use by the fatal effects he had witnessed. A document, which unfortunately had never been published, and which had been prepared by the orders of the administration of hospitals, was most peremptory in this respect. It was the statistical account of the mortality amongst the wounded admitted in 1814 into the hospitals of Paris. In these tables French, Prussian, Austrian, and Russian subjects had been entered, together with a statement of the mode of treatment. All except the Russians were submitted to a severe regimen. The mild cases amongst the latter received what was called a portion of food; others received the half portion, and this *half* allowance consisted of—

Bread, - -	1 lb.
Meat, - -	½ lb.
Vegetables, - -	¼ lb.
Wine, - - -	12 oz.
Brandy, - -	12 oz.

These figures might naturally astonish the meeting; but the tables of mortality would still further surprise the Academy. The mortality was—

For French soldiers,	1	out of	7
— Prussian —	1	—	9
— Austrian —	1	—	11
— Russian —	1	—	27

These were eloquent ciphers; they had been sufficient to convert M. Malgaigne, who, it was true, did not allow brandy to his patients, but a reasonable amount of wine.—*Dr M'Carthy's Report in Medical Times*, Aug. 19.

362.—*Case of Obturator Hernia, with Symptoms of Intestinal Obstruction within the Abdomen, to relieve which the Abdomen was opened.* By JOHN HILTON, F.R.S.—Miss ——, aged thirty-six, in September 1847, had some severe pain and local tenderness on pressure on the right side of the abdomen, above Poupart's ligament.

with continued constipation and some vomiting. During several days these symptoms were relieved by the local application of leeches and fomentations, and the use of aperients and purgative injections. From that time she continued in her usual health until January 20th, 1848, when she was suddenly seized with symptoms of strangulated hernia; but no hernia could be detected, although she was repeatedly examined in reference to that point. Various means were employed, without any permanent relief to the symptoms of strangulated intestine. These means were continued during eleven days. On the twelfth day from the first symptoms of strangulated intestine, Mr Hilton opened the abdomen by cutting in the median line below the umbilicus, and ascertained the existence of an obturator hernia, which had not been at all suspected to exist. The intestine was withdrawn from the obturator opening, by laying hold of it within the abdomen; no external tumour could be at that time detected in the upper part of the thigh. The operation was performed (with the patient under the influence of chloroform) in the morning, and the patient died in the evening of the same day. The post-mortem examination gave evidence of extensive recent peritonitis. The portion of intestine which had been in the hernial sac was distinctly seen, and, on examination, was found to have been in a condition favourable to recovery; the hernial sac remained fixed in the thigh. —*Med. Chir. Soc. London, in Med. Gaz.* July 21.

363.—*Excision of the Os Calcis and Astragalus.* By Mr T. WAKELY.—In a case of disease of these bones and of included articulations, excision has been practised by Mr T. Wakely.

An incision was made from the prominence of the internal malleolus, backwards and downwards to the middle of the heel. A similar incision was then made from the external malleolus downwards and backwards, to join the foregoing. A third incision was next carried along the edge of the sole, from the middle of the first to a point opposite the astragalo-scaphoid articulation, and a fourth, on the opposite side of the sole, from the vertical incision to the situation of the calcaneo-cuboid joint. These latter incisions enabled the operator to make a flap of about two inches in length from the under part of the sole. In the next place a circular flap of integument was formed between the two malleoli posteriorly, the lower border of the flap reaching to opposite the insertion of the tendo-Achillis. This flap being turned upwards, the tendon was cut through, and the os calcis having been disarticulated from the astragalus and cuboid bones, was removed, together with the integument of the heel included between the two incisions. The lateral ligaments connecting the astragalus with the tibia and fibula were now divided, and the knife was carried into the joint on each side, extreme care having been observed to avoid wounding the anterior tibial artery, which was in view. The astragalus was then detached from the soft parts in front of the joint, and from its articulation with the scaphoid bone, and the malleoli of the tibia and fibula were removed with the bone-nippers. The only artery requiring ligature was the posterior tibial.

The operation was performed on the 27th of December 1847. On the 10th of June following, the wound was healed; the patient had quite regained his health, and, with the aid of a stick, walked very well on a high-heeled shoe, the power of flexion and extension of the foot being retained.—*Lancet.*

364.—*Operation for Hare-lip.* By M. GUERSANT (Fils.)—M. Guersant, who has had extensive opportunities of judging of the most favourable period for operating in hare-lip, gives the preference to the period recommended by Dubois, during the first fortnight after birth. He advises against undertaking the operation when the child is about a year old, or during the process of dentition. It may again be performed with much greater hope of success when the child has attained the age of five or six years. Deiffenbach latterly gave a similar preference to the early operation.—*Gaz. des Hôp.*

365.—*New Mode of treating Deafness arising from Destruction of the Membrana Tympani.*—Mr YEARSLEY (*Lancet*, July 1,) mentions a simple means of remedying the loss of the membrana tympani, with which he became accidentally acquainted through the instrumentality of a patient. This consists in inserting a small portion of cotton-wool moistened, into the meatus, and passing it with a probe to the site of the missing tympanum. He relates two very astonishing instances of the improvement in hearing, thus accomplished. The remedy is a simple one, and its usefulness or fallacy will doubtless soon be ascertained —*Prov. Jour.* Aug. 9.

366. — *Treatment employed by M. Ammon in the Purulent Ophthalmia of*

New-born Children. By Dr WENGLER of Dresden.—*External Treatment.*—As soon as the principal symptoms appear, viz. the secretion of pus, recourse must be immediately had to a collyrium, composed of from three to four grains of the extract of belladonna, six to eight drops of chlorine water, and from three to four ounces of distilled water. This collyrium is used tepid. The matter secreted between the eyelids is first removed with a sponge dipped in tepid water; then some drops of the collyrium are allowed to fall on the mucous surface of the lower eyelid, which ought to be depressed for the purpose, and, when the whole of the secretion has been washed away, the eye is covered with a thick compress soaked in the same liquid. As the infant is very restless, this compress is fixed by means of a bandage, so that it cannot be deranged or taken off. The compress is renewed every half hour when the secretion is not very abundant, and every quarter of an hour if there is considerable swelling of the eyelids, and much discharge of muco-purulent matter. When such is the case, it is not sufficient simply to apply the moist compress; but it is necessary each time to free the eye of the purulent secretion. If requisite in a more advanced stage of the disease, the proportion of extract of belladonna is increased to five or six grains, and that of the chlorine water to ten, twelve, or fifteen drops. This treatment is continued so long as the muco-purulent secretion remains; only, if the swelling becomes greater, and the secretion more ichorous, the temperature of the collyrium is increased.

The action of the agents entering into the composition of this collyrium is as follows:—In purulent ophthalmia, so long as the eyelids are spasmodically contracted on the globe, they prevent the escape of the purulent secretion, which accumulates, and so augments the irritation. It is therefore important to allay this spasm, and belladonna possesses in a special manner this property. Belladonna exerts in addition a local sedative effect on the capillary vessels of the conjunctiva, and its power is manifested still more deeply, for it extends to the pupil; there it not only prevents adhesions of the iris, and closure of the pupil, but its action is also seen on the turgescence of the whole anterior chamber, and tension of the cornea, which it diminishes, or even causes to disappear altogether. The purulent secretion of ophthalmia neonatorum readily undergoes putrefaction, becomes acrid, and exerts a most destructive influence on the tissues of the eye, but especially the cornea, which ulcerates. In this way are produced staphyloma and its complications. The advantage of an antiseptic, as chlorine water, in arresting the putrefactive tendency, and so protecting the eye from disorganization, is thus obvious.

Internal Treatment.—Though not to be neglected, this is of much less importance than the local treatment. The two following indications are chiefly worthy of attention: 1st, To allay fever, and procure for the infant a refreshing sleep. 2d, By the use of purgatives, to diminish the increased flow of blood to the head. For these purposes, Ammon prescribes nitrate of potash four to six grains, powder of oyster shells six to twelve grains, distilled water and syrup of manna, of each an ounce; and of this he gives one to two teaspoonfuls every hour. In general this medicine fulfils well the above indications; but if the symptoms are very urgent, half a grain of calomel twice daily is exhibited. — *Annales d'Oculistique*, January 1848.

[We recommend those of our readers, who may adopt the above plan of treatment, to substitute for the belladonna its alkaloid atropia, as being a much more cleanly and efficient preparation.]

367.—*Treatment of Anchyloblepharon.* By M. DIJON.—In cases of adhesion of the eyelid to the globe, M. Dijon passes a lancet-shaped needle across the base of the cicatrix, as deep as possible, but parallel with the margin of the eyelid. Through this aperture he passes a piece of fine silver wire, the extremities of which he joins, and leaves this ring in for fifteen or twenty days, at the end of which time the trajet is free and its sides cicatrized: he then cuts out the wire. It is found, he says, to answer the purpose perfectly.—*Gazette des Hôp.*, Dec. 2, 1847; *Dub. Quarterly Journal*, May 1848, p. 475.

368.—*Scrofulous Ophthalmia.* By M. MORAND.—The irritability of the Schneiderian membrane in this disease, and the sneezing and other phenomena which it so frequently presents, are well known to every practical surgeon, yet, until lately, the actual condition of the mucous membrane lining the nose has not received much attention. M. Morand has lately directed particular notice to this circumstance. He says:—"In scrofulous ophthalmia the olfactory membrane participates with the conjunctiva in the inflammation that is set up; that it is especially about the turbinate bones, and in the anfractuosities of

the nasal fossæ, that the inflammatory action resides; and that this shows itself in the form of an œdematous engorgement, precisely similar to what is observed in the eyelids. The more I study this disease, the more convinced am I that this is the case. A little attention suffices to show that the redness and tumefactions of the pituitary membrane almost always precede or accompany that of the conjunctiva. This can be more positively determined by means of the speculum auris. On examining attentively the interior of the nasal fossæ, one cannot fail to observe that the redness and swelling of the nostrils, and even of the upper part of the lip, that are so commonly observed in persons of a scrofulous habit, are merely an evidence of the inflammatory action going on in that membrane. It is by proceeding in this way that we can best appreciate the degree and extent of this inflammatory action, the extension of which to the palpebral and ocular mucous surfaces is often very rapid; sometimes, however, it remains for a long time stationary, without showing any disposition to extend." For the relief of this disease M. Morand applies the nitrate of silver, either in substance, solution, or ointment, extensively over the surface of the pituitary membrane. The value of this remedy has been extensively attested by Dr Edwards of Bath, and, according to his experience, with the most decided benefit, even in cases of long standing, and where other remedies had failed.—*Dublin Quarterly Journal*, May 1848, p. 477.

369.—*Fatal Tetanus from Injury of the Cornea.*—Mr Pollock has related a case of a man, aged thirty-three, who had received a lacerated wound of the cornea from the lash of a gig whip. The cornea was completely divided, but there was no prolapsus of the iris. Violent inflammation ensued, and on the evening of the sixth day tetanic symptoms set in; on the ninth trismus was fully established, general tetanus ensuing; he died upon the tenth morning, the globe having previously suppurated.—*Med. Gazette*, June 4, 1847; and *Dublin Quarterly Journal*, May 1847, p. 482.

370.—*Statistics of Operations for Cataract.*—Dr Edward Jäger, son of the celebrated ophthalmologist, has given the following statistics of his father's operations for cataract, performed at the Josephine Academy in Vienna.

From 1827 to 1844, Professor Jäger operated on 1011 cataracts, of which 764 were lenticular, 207 capsulo-lenticular, and 40 capsular. The kinds of operation to which he had recourse were as follows:—

Extraction by the superior section in	728
„ by the inferior section	9
Partial extraction . . .	58
Depression	129
Breaking down the lens . .	87
	1011

Of the above number, 63 lost their sight; and it will be seen by the subjoined table, what were the processes employed that gave the worst results:—

Of the	58	operated by partial extraction	3
„	737	„ by extraction	33
„	87	„ by breaking down the lens	6
„	129	„ by depression	21
			63

It follows, from this statement, that extraction has been the most successful; as the proportion of those who lose their sight, to the number in whom the operation succeeded, is 4½ per cent. in extraction; 16 per cent. in depression; and 8 per cent. in breaking down the lens or absorption. In order, however, to derive full satisfaction from these statistical returns, we ought to have been apprised of the considerations, that influenced Professor Jager to have recourse to one operation, in preference to another.—*Bulletin Méd Sciences*, from *Ueber die Behandlung des granar Staares.* Vienna 1845, and *Ranking's Abstract.*

371.—*Extraction of Cataract by Suction.*—M. Blanchet presented to the Academy of Medicine a patient who had been affected with soft cataract for fifteen months, and on whom he had operated by this method with complete success. The pupil having been previously dilated by belladonna, he made a puncture in the cornea at the limit of this dilatation, in order that the slight mark, which would result from the wound, should not remain over the pupil. He then introduced through the incision in the cornea, as far as the crystalline lens, a tube resembling an anal syringe, but differing from it in having a greater diameter, and in its extremity being drawn out like the mouthpiece of a flute; he then aspired through the instrument.

If, after having tried the suction, he found the capsule of the lens opaque, he then proceeded as usual.

The patient had been operated upon ten days, the pupil was perfect, vision

completely established, and no accident occurred as a result of the operation. M. Blanchet has employed this method, since June 1846, on other patients, with variable success; he has also resorted to it in certain purulent and sanguineous effusions into the eye.—*Gaz. Méd.*, Juillet 1847, and *Ranking's Abstract*.

V.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

372.—*The Duration of Labour a Cause of Danger to the Mother and Child.* By Professor Simpson.—In opposition to the general opinion of obstetric writers, Dr Simpson maintains that the mere duration of labour has a direct and decided influence upon the degree of danger and fatality accompanying parturition. It is by means of statistical data compiled from the practical treatise of Dr Collins, a strong opponent of this doctrine, that our author proves the propositions he lays down. The doctrine itself is not new. It was maintained by Dr Simpson's predecessor in the chair of midwifery, Professor Hamilton.

I.—*The Maternal mortality attendant upon parturition increases in a ratio progressive with the increased duration of the labour.* The results of 15,850 cases of labour in which the duration of the process was noted, and among which 138 cases proved fatal, substantiate this proposition beyond doubt. The following table exhibits the rate of increase of the maternal mortality corresponding to the increased hourly prolongation of labour.

Table of the Proportion of Maternal Deaths in relation to the Duration of Labour in 15,850 *Cases of Delivery.*

Duration of Labour.	Proportion of Mothers Lost.
Within 1 hour,	1 in 322 died.
From 2 to 3 hours,	1 in 231 died.
From 4 to 6 hours,	1 in 134 died.
From 7 to 12 hours,	1 in 80 died.
From 13 to 24 hours,	1 in 26 died.
From 25 to 36 hours,	1 in 17 died.
Above 36 hours,	1 in 6 died.

II.—*The Infantile mortality attendant upon parturition increases in a ratio progressive with the increased duration of the labour.* The following table shows the proportion of children lost in labours of different degrees of duration.

Table of the Proportion of Infantile Deaths in relation to the Duration of Labour in 15,850 *Cases of Delivery.*

Duration of Labour.	Number of Infants Still-born.
From 1 to 2 hours,	1 in 20 was lost.
From 3 to 6 hours,	1 in 18 was lost.
From 7 to 12 hours,	1 in 11 was lost.
From 13 to 24 hours,	1 in 6 was lost.
From 25 to 36 hours,	1 in 3 was lost.
Above 36 hours,	1 in 2 was lost.

These two tables given above, refer to the proportion of maternal and infantile deaths as regulated by the duration of the labour. But the occurrence also of complications and accidents during the process, is regulated and influenced by the same law of duration.

III.—*The mortality of most of the Morbid Complications connected with labour increases in proportion as the labour is increased in its duration.*

The truth of this proposition might be proved with regard to each complication separately, such as convulsions, rupture of the uterus, retention of the placenta, hemorrhage, &c. &c., but it may be sufficient to show, that taking these complications collectively, the tendency to their general occurrence becomes greater and greater in proportion as the length of the labour is allowed to become increased.

Table of the Proportion in which 305 *Morbid Complications occurred in* 15,850 *Labours of different Durations.*

Duration of Labour.	Proportion of Complications.
Within 1 hour,	1 in 114 was complicated.
From 1 to 2 hours,	1 in 90 was complicated.
From 2 to 3 hours,	1 in 69 was complicated.
From 4 to 6 hours,	1 in 58 was complicated.
From 7 to 12 hours,	1 in 32 was complicated.
From 13 to 24 hours,	1 in 12 was complicated.
From 25 to 36 hours,	1 in 9 was complicated.
Above 36 hours,	1 in 5 was complicated.

Further, when operative interference, such as by the forceps, crotchet, turning, &c., is required in order to terminate a labour, the *time* of the labour at which that interference is had recourse to regulates the amount of attendant danger, much more than the details and effects of the operation itself. In other words,

IV.—*The mortality resulting from Operative Interference increases in amount according as the period of the performance of the operation is proportionally more distant from the date of the commencement of labour.* The following table demonstrates this proposition, as far as forceps' operations are concerned:—

Table showing the Maternal Mortality attendant on twenty-four Forceps' Operations, to be regulated by the previous Duration of the Labour.

Duration of Labour.	Results to Mothers.
Within 24 hours	1 in 13 died
From 25 to 36 honrs	1 in 6 died
From 37 to 48 hours	1 in 4 died
Above 48 hours	1 in 2 died

Again, the following table of the results of seventy-six cases of craniotomy, affords direct evidence of the proposition :—

Table of the Maternal Mortality attendant upon seventy-six Craniotomy Operations, as regulated by the previous Duration of the Labour.

Duration of Labour.	Results to Mothers.
Under 24 hours	1 in 19 died
From 25 to 48 hours	1 in 8 died
Above 48 hours	1 in 3 died

—*Prov. Med. and Surg. Journ.*, March 1848.

373.—*Causes of Abortion.* By Dr W. TYLER SMITH.—Our author divides the causes of abortion into two great classes; I. Those depending on irritation of extremities of excitor nerves—*eccentric causes.* II. Those depending on irritation of the spinal centre—*centric causes.*

I.—*Eccentric Causes of Abortion.*

Irritation of the *mammary nerves* is first enumerated. Among other evidence of their influence may be adduced that of cases in which, owing to the synergic action between the uterus and breasts, the mammary secretion has been almost entirely stopped by conception. In such a case the child will suck vigorously to obtain the milk and in vain, until the uterus is excited to the expulsion of the ovum, after which event the secretion of milk returns abundantly.

2. Irritation of the *trifacial nerve.*—Sometimes abortion happens without any other assignable cause than the appearance of the dens sapientiæ, just as teething may excite strangury in the infant.

3. Irritation of the *vesical nerves.*—As in cases of abortion from the presence of stone in the bladder or any vesical irritation.

4. Irritation of the *ovarian nerves.*—As evidenced by the fact of abortion occurring generally at the menstrual epoch, or, in other words, at the period of the ovarian nisus.

5. Irritation of the *rectal nerves.*—As shown in cases of abortion brought on by the irritation of hemorrhoids, ascarides in the rectum, violent purging, dysentery, &c.

6. Irritation of the *vaginal nerves.*—Plugging the vagina is a plan sometimes resorted to for artificially producing abortion.

7. Irritation of the *uterine nerves.*—This is undoubtedly the most important of all the causes of abortion. In evidence may be adduced the influence of the death of the fœtus in producing abortion, also the influence of separating the membranes, of a diseased placenta, of effusion of blood into the uterine cavity, irritation of the os uteri, plugging the os uteri, &c. &c.

It is remarkable that irritation of the stomach, between which and the uterus there is such a distinct relation, should not produce abortion. After delivery, the slightest gastric irritation will excite contractions of the uterus; but during pregnancy, gastric irritation and sickness even to death, may occur without disturbing the fœtus in utero. Again, in regard to the lungs, utero-gestation retards the progress of disease in them, but if the most extensive disease of the lungs exist, it does not excite abortion.

II.—*Centric Causes of Abortion.*

Among these are certain *erythematic* conditions of the system. Such are the exanthemata, particularly small-pox and syphilis. Again, we have the *pyretic* state of the system, as at the commencement of fevers and acute inflammations, also *diseased states of the blood,* whether idiopathic or artificially produced by oxytoxic agents.

We have also in this class of causes the influence of *mental emotion.*—*Lancet* April 15, 1848.

[We cannot avoid expressing our belief, that in discussing this subject our author has refined to a degree not justified by clinical observation. His theoretical views are, in many respects, well founded, but too much stress is certainly laid on the influence of the nervous system. The whole course of lectures, from one of which the above notice is extracted, can be recommended to the student of obstetricy as worthy of careful perusal.]

374.—*Cases of Vaginal Hysterotomy.* By Dr Gunning S. Bedford.—The first case was that of a female, who had previously been made to abort by the notorious Madame Restell, and in whom the os uteri became completely closed after she had been again impregnated. On labour coming on, a bilateral section of the vaginal portion of the uterus was made; and in ten minutes after the operation the patient was delivered of a full-grown living child. Both mother and child did well.

The second case occurred in the practice of Dr Clinton. The woman had been in labour upwards of forty hours; the pains were frequent and expulsive, and the case was assuming a serious character. Dr Bedford proceeded with a probe-pointed bistoury covered to within a few lines of its extremity with linen, and made a bilateral section of the neck of the womb, extending the incision to within a line or two of the peritoneal cavity. The head of the child was felt through the opening made. Six hours afterwards, no advance having been made, although the pains were severe, another incision was made in the posterior lip of the uterus. Twenty-four hours after the operation the os uteri was enlarged to the size of a dollar. The pulse was 140, and the patient's strength was evidently giving way. It was resolved to deliver with the forceps, which was then done with great difficulty. Both mother and child did well.—*British American Journal of Med. and Phys. Sci.*, June 1848.

375.—*Prolapsus of the Uterus during Labour.* By Dr Watson.—This woman had been some time in labour with her first child, under the charge of two midwives, when Dr Watson was called in. On examination, he found the uterus entirely without the vulva, containing a fœtus at the full time; the os uteri dilated to about the size of a twenty-five cent piece, very thick, firm and unyielding, with the caput succedaneum projecting through the orifice. Dr W. proceeded to envelope the protruded uterus in linen cloths soaked in warm water, and, after several applications, the uterus began to act with such force as to give strong fears that laceration might take place, but the pains had no effect in enlarging the os uteri. Dr W. then proceeded to enlarge the os by incising it at three points, and after this, the child was soon expelled. Although still-born, it was easily resuscitated. After the placenta was extracted the uterus contracted firmly. It was then returned to its proper position. The mother made a very good recovery.—*The Medical Examiner and Record*, Philadelphia, April 1848.

376.—*Sudden Death after Delivery.* By Dr Reynolds.—This woman, æt. twenty-three, in her first pregnancy, had been for some months troubled with severe cough, which was believed to be sympathetic of her condition. After a labour of about two hours' duration, she was delivered of a still-born infant, and immediately she began to sink, and died in less than six hours. There had been no flooding. On a post-mortem examination, the only morbid appearances of any importance were found in the lungs. That on the right side was small and wasted, and the air-cells engorged with venous blood. The left lung was also very small, and had a peculiarly exsanguine appearance. There were no tubercles in either lung. —*British American Journal of Med. and Phys. Science*, June 1848.

377.—*Insertion of the Umbilical Cord upon the Membranes of the Ovum. Rupture of a Branch of the Umbilical Vein, and Death of the Infant.* By M. Lamestre.—On the evening preceding delivery, this mother was taken with a violent pain in the loins and belly, and presently a large quantity of blood escaped per vaginam; but by this abundant hemorrhage the mother was in no way affected. The child was born dead. On examining it after birth, the cord was found pale and exsanguine, and inserted upon the membranes five or six inches from the border of the placenta. At its insertion, the cord bifurcated into two branches, consisting each of an umbilical vein and artery, which, after advancing undivided for about two inches, then gave off several branches, which proceeded to the placenta.—*Archives Générales de Medecine*, June 1848.

378.—*Fracture of the Cranium before Delivery in a Fœtus at the full time.* By M. Blot.—A woman, æt. twenty-seven, who had been in labour for a short time,—hav-

ing the os uteri somewhat dilated, and the membranes still entire,—fell from a second story, and fractured the right thigh. When carried into bed and examined, the child's head was found low down in the pelvis, and the bones crepitated as if broken in several parts. The child was delivered by the forceps; it was still-born. There was a great effusion of blood below the scalp; the parietal bones were broken into several parts. The dura mater and meninges were unhurt.—*Archives Générales de Med.*, June 1848.

379.—*Removal of a Fibrous Tumour of the Uterus.* By M. RECAMIER.—This woman, æt. fifty, had suffered for a year and a half from repeated uterine hemorrhagies which increased at each recurrence. On examination, the uterus was found retroverted, the os uteri patent, and within the cavity of the uterus a large sessile fibrous tumour projecting from the posterior wall, and having an ulceration on the surface at its lower part. It was evident that very soon this woman must succumb to the violent floodings to which she was subject, and consequently it was determined to attempt to remove the tumour. A very incomplete account is given of the operation. The uterus was pressed down by means of one hand applied on the hypogastrium and a finger introduced per rectum, with the object of hooking down the uterine mass. The tumour was removed in successive slices till only the healthy tissue of the uterus remained. This woman made a good recovery.—*L'Union Méd.* July 15, 1848.

VI.—MATERIA MEDICA AND THERAPEUTICS.

380.—*On the Use of Chloroform.* By Mr HUMPHREY.—"Since its introduction, chloroform has entirely superseded ether in our practice; we have been in the daily habit of using it during the last nine months, and I am not aware that its administration has been productive of any ill consequence in a single case. The only formidable symptoms which I have witnessed from the administration of chloroform have been those of fainting. On one or two occasions these were rather alarming. Splashing the face freely with cold water was found to be the most effectual means of inducing re-action. I cannot tell what conditions of the system decidedly contraindicate the use of chloroform, but I should be unwilling to administer it to persons in whom fainting was likely to be attended with serious consequences—such as old people, or persons with feeble or diseased heart, intermitting pulse, or disease of brain.

"I have observed chloroform and ether to act exceedingly well on delicate and enfeebled persons, those very cases in which we have most to apprehend from the pain and shock of an operation; and the knowledge of this fact has induced me to recommend amputation in some cases where I should have been unwilling to submit the patient to the unmitigated pain of such a procedure.

"Of the influence of chloroform in preventing the sufferings of the patient, during an operation, there can be no doubt, and if it do no more, it is a wondrous boon; but the more important question of its influence upon the ultimate recovery of the patient, can be decided only by the carefully collected results of extensive experience. I can venture only to give my own impressions, which have gradually grown, from the observation of many patients, and which are decidedly in favour of the agent. Though quite prepared for occasional fatal accidents during its administration, I believe that the average success of operations will be increased by its cautious and discriminate use. The shock to the system (a very important item in an operation) is so closely connected with the pain felt during the time, and is so greatly lessened by the absence of pain under the influence of chloroform, that in several instances, and those cases in which its effects were most to be dreaded, I have been unable to trace any of its usual consequences. There has been certainly, on the whole, less prostration followed by feverish re-action, after operations under ether and chloroform, than we used to witness before the introduction of these agents."—*Prov. Jour.* August 9.

381.—*Traumatic Tetanus cured by Chloroform.* By Mr BAKER.—A man had his finger jammed in machinery, and severe tetanic symptoms supervened on the fifth day. He had lost all power of articulation and deglutition. The chloroform was administered on a handkerchief, and in three minutes the muscles began to yield, and in a short time the patient fell into a sound sleep, with the muscular system relaxed and free from convulsions. The tetanus did not return, but the finger

continued much swollen, and was amputated on the twelfth day after the accident. The case did well.—*Lancet*, June 3.

[This is a very interesting case, and, in conjunction with others that have been recorded, points to chloroform as the remedy from which most is to be hoped in the treatment of this intractable malady.]

We subjoin a short account of two of the fatal accidents which have recently occurred from the use of chloroform. Melancholy results of a similar kind have followed its employment in Birkenhead, London, Boulogne, and Paris. We defer till next Number some general remarks which we intend to offer on these cases:—

A young woman presented herself with disease of the distal phlanx of the middle finger of the left hand, requiring amputation at the middle joint. As she appeared of timid disposition, and exhibited more than usual reluctance to submit to the operation, a drachm of chloroform was administered in the usual way, namely, by sprinkling it on a pocket-handkerchief and causing her to inhale the vapour. She coughed a little, and then gave a few convulsive movements. When these subsided, the necessary incisions were performed, which did not occupy more than a few seconds. Scarcely a drop of blood escaped. The patient was then put into the recumbent posture, with the head low. Active means were taken to bring her out of the state of collapse into which she had fallen. But although these means, including artificial respiration, were perseveringly employed for five hours, the unfortunate woman never breathed again. Death was almost instantaneous, for, after the convulsive movements above described, she never moved or exhibited the smallest sign of life. No opportunity was afforded of making a post-mortem examination; so that it is not known whether or not there were any special circumstances, such as aneurism of one of the great vessels, or disease of the heart.—Dr Hardinge in *Overland Athenæum*.

A young man, 24 years of age, corpulent, of a lymphatic habit, was admitted into the Hôpital Beaujon on the 25th of last June, having been struck in the left thigh by a ball, which, traversing the limb from before backwards at its middle part, had broken the diaphysis of the thigh-bone into large splinters. The disarticulation of the thigh, judged indispensable, was decided on. The patient was submitted to the action of chloroform by means of a small bottle pierced with several holes, containing a peculiar diaphragm saturated with chloroform, and surmounted, at its opening, with a large cone adapting itself to the mouth of the patient. The nostrils were closed by the finger of an assistant. At the end of three or four minutes there were slight convulsive movements, and soon afterwards the patient was in a state of complete relaxation. M. Robert commenced immediately. The femoral artery being compressed in the groin, he plunged in a long straight knife at a point three fingers' breadth beyond the antero-superior iliac spine, and made a large anterior flap. During this part of the operation, the patient (although the artery had for a very short time not been perfectly compressed) lost but a very small quantity of blood. At this period the patient began to recover consciousness. M. Robert wished to prolong the state of insensibility, and directed, with this view, a renewal of the inhalation while he continued the operation; but a quarter of a minute had scarcely elapsed when the respiration became stertorous, and he immediately discontinued the inhalation. The patient's face was very pale; his lips discoloured; his eyes, the pupils being dilated, were turned upwards under the upper eyelid. The operation was immediately suspended, and M. Robert hastened, with the help of assistants, to attempt to recover the patient, whose respirations had become infrequent and sighing, whose pulse was no longer perceptible, and whose limbs were in a state of perfect relaxation. Frictions to the skin, irritation of the pituitary membrane, frequent movements of the arms and the thorax, were all employed with energy and perseverance. Several times respiration seemed to return, and the pulse became appreciable; but the amelioration was but for the moment, and, after three quarters of an hour of incessant efforts, the patient had ceased to live.—*Med. Gaz. and L'Union Méd.*

382.—*On the Action of Diuretics.* By Dr Golding Bird.—Diuretic agents are divided into two classes by Dr Bird. The first, termed *specific diuretics*, comprises those remedies which exert no chemical action on organic matter out of the body, and appear to be incapable of augmenting the quantity of solids in the urine, and hence they are only of use in increasing the elimination of water—they may, and do act as renal hydragogues, but not as renal depurants. To this class belong squill, copaiba, broom, juniper, turpentine, digitalis, &c. All these have the power of increasing the discharge of fluid by the kidneys; but the quantity of solids present in the urine will never be found

to exceed much the normal quantity. Hence, these drugs are only of service in the removal of dropsical accumulations.

The second class (termed *chemical* or *alterative diuretics*) comprehends those medicines which increase the amount of solid elements in the urine, and thus act as true depurants. It includes "the alkalies, their carbonates, and their salts, with such acids as in the animal economy are capable of being converted into carbonic acid, including the acetates, tartrates, citrates of soda and potass. These remedies all act alike; they all actively stimulate the excreting function of the kidneys, and increase the bulk of the urine; but they do more, they actually increase the metamorphoses of tissue by, in all probability, a direct chemical action on the elements of worn-out and exhausted tissues, or other matter in the capillary laboratory of the body. It is well known that alkalies and their carbonates powerfully dissolve albumen out of the body, and even break it up into various secondary bodies: thus, digested with an alkali, albumen yields leucine, protid, and erythro-protid, bodies allied to gelatine, formic acid, and other compounds. In like manner casein is broken up into tyrosin, leucine, valerianic acid, and other elements. From some such changes occurring in the body, and in the living organism itself, we find the chemical diuretics easily effecting important changes." This Dr Bird has frequently confirmed by direct experiment; and he relates the case of a lady in whom, by the use of three drachms of the acetate of potass, the amount of solid ingredients of the urine passed in the twenty-four hours was increased from 416 to 782 grs., the increase consisting chiefly of creatine, creatinine, uroxanthin, and matter rich in sulphur. The quantity of urine passed daily was at the same time increased from sixteen to forty ounces. "Now, admitting that the elements of our frames resist chemical influences in the ratio of their vitality, it would follow that such constituents of our fibres as present the greatest departure from health are less highly vitalized, and thus yield the easiest to the chemical force exerted by the alkaline diuretics. On this account it is fair to presume that, when we cause an alkaline carbonate to circulate through the blood, it exerts an influence on the nascent elements of those matters less highly influenced by life, allied to that which they exert on dead matter, aids their resolution into substances allied to those produced out of the body, and actually causes the matter to assume so soluble a form as to allow of its ready excretion."

"I would earnestly (Dr Bird observes) beg a careful and steady trial to the *depurating or chemical diuretics*, especially the salts of potass with vegetable acids, in the treatment of chronic affections, in which the exciting cause, or existing disease, depends upon the presence of some product of less vitality or imperfect organization. I fully believe that in many instances such matters will be often found to yield, whether they present themselves as albuminous deposits in glands, furuncular disease of cellular tissue, or incrustations on the skin, as in some of the squamous and tubercular cutaneous diseases. That they will succeed in increasing the waste of matter, is, from my observation, beyond all doubt; that the lowest vitalized matters will yield to the solvent the readiest is most probable, and that an important and powerful addition to our supply of therapeutic weapons is thus certain."—*Med. Gaz.* Aug. 11, 1848.

383.—*On the Utility of Trisnitrate of Bismuth in the Diarrhœa accompanying Phthisis.* By Dr T. THOMSON, London.—The author considers the trisnitrate of bismuth to surpass in efficacy our most approved remedies for this complaint. He has taken every opportunity, during the last twelve months, of testing its powers, and has preserved notes of twenty-one of the cases in which it was administered. Of these, eighteen were phthisis in various stages of progress, and three bronchitis. In fifteen of the patients the diarrhœa was entirely removed; in four, transient benefit was experienced; and the remedy proved useless only in two instances. The dose administered was about five grains three or four times daily, usually combined with a little magnesia and gum arabic.—*Royal Med. Chir. Soc. Meeting, London.*

VII.—FORENSIC MEDICINE AND TOXICOLOGY.

384.—*Asphyxia by Drowning; Ingesta in the Bronchi.* By Professor TOURDES, Strasburg.—A woman of thirty drowned herself in the Ill. She was taken out without delay, and means were used in vain for resuscitation. The face was pale; the tongue was retracted; there was distinct vascular injection at its base, also of

the soft palate, the epiglottis, the larynx, and the whole extent of the bronchial ramifications. In the mouth, in the trachea, and in the bronchi, were found alimentary matters white and pulpy; and in the gullet and stomach, matters with the same characters. A great quantity of water mixed with a fine froth was also contained in the air-passages. The lungs were of uncommon size, and there was some subpleural emphysema. The heart contained a dark liquid blood, more pitchy in the left than in the right cavities. There was much water in the stomach. The brain was considerably injected. There was much serosity under the arachnoid, and in the ventricles. The introduction of alimentary matters into the air-passages must have been the cause of the speedy death. — *Gazette Médicale de Strasbourg*, March 20, 1848.

385.—*Asphyxia by Drowning; Bloody Froth in the Bronchi.*—The body of a young man was taken from the canal of the Rhine, who was drowned the day before. The cuticle of the hands and feet was hardly blanched. The windpipe and air tubes contained much water, and a fine red froth glued to the walls of the tubes, the mucous membrane of which was strongly injected. The lungs were large, of a deep red colour, gorged with a red froth, and had on their surface emphysematous protuberances of a pale colour. The blood in the heart was fluid and reddish. The stomach contained much colourless fluid, and some greyish remnants of aliment. The ileum exhibited a remarkable development of isolated follicles, covering the extremity of the small intestines, like an extensive eruption. This is a well-marked case of asphyxia. The close of life had been long and painful; the froth was mingled with blood—a rare occurrence in man.—*Ibid.*

386.—*Asphyxia by Drowning in a Child.*—The body of a female child, of ten years of age, was taken from the water eighteen or twenty days after drowning. All the signs of asphyxia had disappeared; the whole body showed marks of gaseous putrefaction. The face was swollen, and as black as that of a negro. The eyes were sunk, the nose flattened, the tongue projected between the arches of the teeth. The skin, deprived of its cuticle, was green and blue over the trunk and extremities. The cuticle of the hands and feet was thickened and wrinkled, and easily detached; the nails still adhered with some force. The heart, distended with gas, contained a little frothy blood in the right auricle. The two ventricles showed each a very different colour, dependent, without doubt, on the unequal quantities of blood in the respective cavities at the moment of death. The right ventricle was black, the left red. The lungs were green and emphysematous; the brain and the cerebellum softened, green and fetid. The state of the hands and feet here afford the indication of an immersion between fifteen and twenty days.—*Ibid.*

387.—*Asphyxia by Suspension.*—The bodies of two men who had hanged themselves, were examined on the same day. The one, aged fifty, was found hanged on a tree with a new cord. The face was blue, the pupils dilated, the tongue between the teeth; no effect on the genital organs; the mark of the cord was oblique, ascending from right to left, and passing over the thyroid cartilage in front, and behind over the occipital bone, where there was a deep impression corresponding to the knot of the cord. This mark of the cord was brownish, dry, between five and six lines broad, streaked, without any trace of ecchymosis, spread over with oblique furrows, and small red elevations arising from the impression of a hard and strongly-twisted cord. A slight brownish injection was observable on both lips. The larynx, the muscles and vessels of the neck, before and behind, showed no sign of lesion. The lungs were depressed, considerably engorged; there was some froth at the commencement of the bronchi; the mucous membrane of the air-tubes was injected, as was also the base of the tongue. The heart, particularly on the right side, contained black liquid blood. The stomach was empty.—The other was a younger man, who hanged himself with his handkerchief. The face was pale, the tongue pressed against the arches of the teeth. On the right side of the neck was an irregular superficial groove, varying in breadth from 1-5th to 4-5ths of an inch, ascending from the thyroid cartilage towards the ear. On the left side the groove divided into three branches, corresponding to the folds of the handkerchief, and was marked out by a whitish line on a blue ground over the upper part of the sterno-mastoid muscle, and was lost behind the ear. The head had been surrounded by a simple ring, formed by the handkerchief. A clot of blood, the size of a bean, was on the left side under the skin of the groove. The lungs were depressed; the pulmonary congestion was moderate. There was an abundant frothy liquid in the bronchi, which were much injected. The base of the tongue was somewhat red. The heart

was hypertrophied; it contained, particularly on the right side, liquid blood, with some diffluent clots. The stomach was empty, as well as the bladder.—*Ibid.*

388.—*Incomplete Suspension—the Feet touching the Ground.*—A man, about fifty, passed the night in a public-house. In the night he called to a girl to bring him a light. In a few minutes she went into the apartment, and found him suspended by his neckcloth from a hook in the wall, his feet resting on the floor. There was no mark of violence. A groove of a yellowish colour, broad, irregular, superficial, oblique, occupied the middle of the larynx, covering the thyroid cartilage to the extent of a little more than an inch. This groove was a little more marked on the left than on the right side; it ascended towards the mastoid processes, and was lost in the hair at the back part of the head. There was no ecchymosis and no erosion—every thing indicated a slight compression. The larynx, the muscles of the neck, the carotid arteries, the cervical column, were uninjured. The tongue was deeply injected at its base, and was retracted far from the dental arches. The mucous membrane of the air-passages showed slight vascular ramifications, and was covered with yellow mucosities, without froth. The two lungs were reddish, and contained a considerable quantity of blood, particularly the right, and the pleuræ were strongly adherent. The heart was hypertrophied; it contained, particularly on the left side, a black liquid blood, mingled with some diffluent clots. The stomach was filled with whitish alimentary matters, not much altered, exhaling an acid odour. The bladder was distended with a turbid urine; the sexual organs were unaffected. The brain was bnt slightly injected. Insufficient as seems to be the cause of death in this case, there was no reason to suspect that the deceased had met with any foul play.—*Ibid.*

389.—*Poisoning by the Seeds of the Jatropha Curcas, or Physic Nut.* By H. LETHEBY, M.B., Lecturer on Chemistry at the London Hospital.—A labourer in the London Docks, at the instance of two sailors, ate the kernels of five physic nuts. In about a quarter of an hour he began to experience a burning sensation in his mouth and throat, and the abdomen felt sore and distended. In the course of a few minutes, he was seized with violent sickness, and, within an hour, vomited five times, and was severely purged. The other symptoms continued, and he was hot and feverish. An hour and a half after taking the seeds, a profuse perspiration broke out over the whole surface of the body, and he became so weak as to be hardly able to walk about. In the next half hour this debility increased; he became very giddy, and ultimately quite insensible. In this state he remained for twenty minutes, but after a time recovered so far as to walk for aid to the London Hospital, where he arrived about four hours after he had taken the poison. He was then very weak, and complained of heat and dryness in the mouth and throat, of numbness of the tongue, and of pain in the abdominal region. His countenance was pale, and somewhat anxious; the pupils were natural; the hands rather cold; the pulse 140, and weak. By means of an opiate and cordial he was soon relieved, and enabled to return home. The author of this case states that the kernels of the physic nut are used in this country as a purgative for cattle, and that he believes they are also used for the manufacture of what is now and then met with at our drug sales under the name of English Croton oil.—*London Medical Gazette*, July 21, 1848.

390.—*Wound of the Heart, Fatal after Seventy-Eight Hours.* By Dr ALEXANDER.—The subject of this case received two wounds in the chest, while engaged in a scuffle. The wounds were inflicted by a knife, and were followed by little external hemorrhage; death took place, however, seventy-eight hours afterwards. On dissection, one of the wounds was found to be trivial, having penetrated only to the second rib; the other had penetrated above the fifth left rib, three-fourths of an inch from its junction with the cartilage, and had divided the rib and the intercostal artery. The pericardium was wounded obliquely, and contained a few ounces of bloody serum. The left pleura was filled with blood and serum. The wound likewise passed entirely through the heart, about half an inch from its apex, opening and traversing the left ventricle. The diaphragm was also wounded.—*American Journal of Med. Science*, Nov. 1847; and *Prov. Med. Journal*, July 26th, 1848. [Of twenty-nine cases of penetrating wounds of the heart, observed by Ollivier and Sanson, only two were fatal within forty-eight hours. —*Devergie, Méd. Legale*, Vol. II. p. 246.]

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

VOL. I. OCTOBER, 1848. No. IX.

I.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

391.—*On the Pathological Changes in Mucous Inflammations.* By RUD. VIRCHOW.—All inflammations are to be considered as alterations of the nutritive process, by which the plasma of the blood is thrown out of the vessels in increased quantity. In inflammations of mucous membranes, their anatomical relations cause the exudation of this plasma upon a free surface. The plasma itself may be unchanged in constitution, or its fibrine may be increased in quantity. Differences in the constitution of the plasma determine differences in the result; and thus are established three leading forms of mucous inflammation:

1. *The Catarrhal Form.*—In this the quantity of the blood-plasma is increased, and thrown out on the free surface. The cells (of epithelium) are formed in greater quantity than normal; but they do not reach their normal developement, being replaced constantly by an increased succession of new ones. The richer the plasma, the more rapid is the self-development. In the so-called *chronic catarrh*, there are frequently found in the fluid cells quite perfectly developed, of the aspect of the ordinary epithelium. In acute cases the cells do not reach this stage of development; they do not take on the epithelial forms characteristic of the part, but are thrown off as round, more or less spherical, mostly single-nucleated cells (mucous corpuscles). In the very acute, particularly the blennorrhagic forms of inflammation, almost all the cells are found in the earliest stages of development, smaller, more delicate, and containing often three to five nuclei; in short, possessing all the characters of the ordinary pus cell. All these forms may be considered as different grades of the epithelium cell; or, if the name *epithelium* be dropped, as cells developed on the surface of a mucous membrane, and whose only difference is their different degree of development.

2. *The Croupous Form.* In this the plasma is not only increased, but is also altered in constitution, containing a large amount of fibrine, and coagulating more or less completely. The coagulum lies free on the surface of the membrane. This form is most frequent in the respiratory mucous membrane. The false membrane is either softened, friable (as in tracheal croup), and contains many cells; or it is of a more firm and fibrinous character (as in bronchial croup and exudation into the air-vessels, or true pneumonia), and contains the products of rupture of the capillary vessels, red and colourless blood corpuscles. In pneumonia the stage of hepatization, where the air-cells are filled with firm coagulated exudation, is generally succeeded by that of purulent infiltration, in which cells in every grade of development are formed in great abundance. In the first stages these cells have various degrees of resemblance to pus or epithelium; in the stage of resolution of the pneumonia, we find the air-cells full of granular cells and masses, or a finely granular emulsion, which are to be considered as the retrograde steps of the newly formed cells.

3. *The Diphtheritic Form.*—In this the exudation consists of nearly dry coagulated amorphous fibrine, and is infiltrated into the tissues composing the superficial layer of the mucous membrane, or rather of the submucous cellular tissue; for when it projects from the free surface, it is generally covered by the epithelial layer. Where organization proceeds in this kind of exudation, it is generally very imperfect; more commonly it is entirely absent, and a superficial slough is formed. Hence this form has been rightly considered as allied to a gangrenous form of inflammation; it is, in truth, closely allied to hospital gangrene.—*Archiv. für Pathologische Anatomie*, &c. Band I. Heft 2.

[We shall take another opportunity of adverting to these opinions, as well as to

other views enunciated in this able journal. In the mean time, we may state that we agree in many of the author's conclusions, although differing from him in some points; as, for instance, in regard to the constitution of the blood plasma, which we believe to be *least* altered where the fibrine is in greatest quantity, as in the croupous and diphtheritic forms; and *most* altered where, as in the catarrhal forms, the inflammatory phenomena are but a slight alteration of the ordinary secreting process. We believe that the membrane, in its healthy state, possesses a power of selecting from the blood plasma a new product—mucus; that in disease the nature of this product is changed, and assimilated more and more to the plasma of the blood; in other words, that while the vessels acquire an increased power of pouring out the elements of the blood plasma, the power of the membrane to alter and select from these elements is diminished.]

392.—*On Open Foramen Ovale.* By Dr MAYNE.—One of the consequences of this organic defect is, to permit the venous blood to pass, in quantities more or less considerable, from the right side of the heart directly into the left, without traversing the lungs or undergoing the process of respiration. The assemblage of symptoms produced in this manner by the admixture of the venous with the arterial current at the *left* side of the heart, and the consequent circulation, throughout the system at large, of blood imperfectly aërated, constitutes a form of cyanosis well known to physicians. Comparative anatomists are also aware, that the human circulation, thus perverted, is somewhat analagous to the normal plan of the circulation in many of the reptile tribes, and that individuals so afflicted resemble in certain functions the animals to which they may (not inaptly) be considered as blood relations. The records of medical science abound with examples of cyanosis thus produced.

Other cases there are, in which the foramen ovale remains permanently open *without* producing cyanosis; and certain it is (let the explanation be as it may) that a patent condition of the aperture in question is compatible with a long life, and with a healthy condition of the circulatory and respiratory functions.

Much ingenuity has been displayed by writers, particularly those of the French school, in attempting to explain such dissimilar results from one and the same organic lesion. In many instances, where an open foramen ovale produces *no* disturbance of function, the valvular disposition of the aperture, or its small size, prevents any interchange of the venous and arterial blood; and in others, the ventricles, the auriculo-ventricular, the pulmonary, and the aortic orifices, retain their proper dimensions, and the auricles their just proportions, so that the blood at either side of the septum flows onwards in its natural course, without impediment, and consequently no intermixture arises.

There is still, however, a third class of cases of the same malformation. In these, arterial blood passes from the left side of the heart into the right, through the open foramen ovale, and thus a mixture of arterial with venous blood taking place in the right auricle, the current transmitted to the lungs for aëration is a mixed fluid, consisting partly of venous and partly of arterial blood. This deviation from the natural course of the circulation is the converse of that already described as producing cyanosis; in the one, the current flows from the right auricle into the left, depriving the lungs of a portion of the blood which ought to circulate through them, and supplying the system at large with a mixed fluid, partly venous and partly arterial, thus causing cyanosis; whilst in the other, the current flows from the left auricle into the right, depriving the system at large of a portion of the blood which ought to supply it, and transmitting to the lungs a mixed fluid, partly venous and partly arterial.—*Dublin Quarterly Journal.*

393.—*Influenza and Ozon.* By Dr SPENGLER.—In our April *Retrospect*, p. 58, will be found some remarks by M. Schönbein on the substance termed *ozon* as a cause of disease. Dr Spengler's observations on this subject were made in the small village of Roggendorf, near Mecklenburg. In the end of the year 1846 slight catarrhal affections prevailed, without any observable increase in the quantity of ozon in the atmosphere. About new-year's day there was a great increase of the number of catarrhs, which also took the character of influenza. About the same time, and particularly on the 9th of January, a very great increase of the quantity of ozon present in the air, was observed.—*Zeitschrift für Rationelle Medizin.* Band VII. Heft 1.

II.—PRACTICE OF MEDICINE.

394.—*On some of the Symptoms of Typhoid Fever.* By J. B. S. Hillairet.—*Double Pulse.*—From observations made on eighty-six cases of typhoid fever of various degrees of intensity, the author concludes, first, that this is a true symptom of typhoid fever or dothinenteritis; second, that it is produced by the development and predominance of typhoid phenomena, properly so called; these being almost peculiar to the second and third periods, it is hence a symptom belonging to these two periods; for although typhoid phenomena occasionally obscure the inflammatory symptoms of the first stage, the double pulse, though present sufficiently often under these circumstances, is not so distinctly marked; third, it betokens a degree of gravity in the symptoms which must be borne in mind in the employment of remedies.

Arterial and Cardiac Murmurs.—M. Beau, in the *Archiv. Gén. de Médecine* for 1845-6, brought forward and supported statistically the opinion, that these murmurs were an almost essential symptom of this fever being present in five-sixths of the number of cases examined (twenty-five men). Dr Hillairet concludes, from careful and repeated examinations of fifty-four patients, male and female, in whom the disease varied in severity, and of whom twenty-two had these murmurs in both heart and arteries, thirteen in the arteries alone, and nineteen had none at all; first, that if primary they depend on a previous bad state of health—a state of actual chlorosis or anæmia from privation or previous disease; and second, that, when developed in the course of the disease, they arise in consequence of prolonged abstinence or energetic treatment.

Is there any direct Relation between the occurrence of Epistaxis and the subsequent Development of the Typhoid Eruption?—That a relation exists has been maintained, but M. Hillairet's observations have led him to a different conclusion. Of fifty-four cases, eighteen had neither epistaxis nor eruption; sixteen had the eruption and no epistaxis; twelve epistaxis and no eruption; and eight epistaxis with subsequently the eruption; but even amongst the latter there was no relation between the severity of the epistaxis and the amount of the eruption.

Cephalalgia.—This, if accompanied by other symptoms of nervous depression, as photophobia, vertigo, ringing in the ears, and a tottering walk, the author considers one of the most constant symptoms of typhoid fever. Of fifty-four cases, forty-eight had the headache, accompanied by the other symptoms above mentioned, the tottering walk being sometimes absent; in four none of these symptoms were present; one had giddiness without cephalalgia, and another cephalalgia without giddiness. In every case but two the cephalalgia yielded to the first bleeding, and in those two the fever became irregular—the cephalalgia was almost always seated in the frontal region, and accompanied by a feeling of weight above the eyes; occasionally it was general.—*L'Union Médicale*, August 1848.

[M. Hillairet is decidedly wrong in regarding the *double pulse* as a *true* symptom of the fièvre typhoide. The double pulse (pulsus dicrotus, recidivus, doppelschlag) is a symptom of debility, and may present itself in any disease accompanied by typhoid symptoms. Thus we have observed it in continued fever, pneumonia, bronchitis, phlebitis, chlorosis, phthisis, &c. It indicates, we believe, diminished contractility of the arterial walls, and is associated with a full and soft pulse. To account for its formation is difficult; but the following appears to us the most probable explanation:—The wave of blood advancing from the heart occasions the first beat, then passes on to the hand, in entering the capillaries of which it meets an obstacle sufficient to throw it back to a certain extent, or, in short, to produce a wave of reflux. In the healthy and firmly contractile artery, this wave of reflux is not perceived at the wrist, but we can suppose that it may be felt in an opposite condition of the vessel. The fact that the double pulse may often be perceived at the wrist, while only a single pulse is felt in the arm, favours this view. In England, the important indications of treatment and its results, derived from the pulsus dicrotus, are, we may safely say, almost entirely overlooked. We purpose returning to this subject in an early number of the *Retrospect*.

The author's view of the origin of arterial and cardiac murmurs is probably correct. They are certainly not an essential symptom of typhoid fever, as they are frequently present in typhus, and may occasionally bo heard during the course of acute inflammations of a severe character.]

395.—*On the State of the Spleen in Intermittent Fever.* By M. Piorry.—[The following opinions were emitted by

M. Piorry, in a recent and lengthened debate at the French Academy of Medicine, on the condition of the spleen in intermittent fever. Although we by no means yield entire assent to his doctrines, still, as emanating from one whose experience in this department of medicine is very extensive, they merit notice.]

According to M. Piorry, the miasm primarily absorbed into the blood exercises its first morbific influence on the spleen, and on the nerves of the splenic plexus. This is manifested by enlargement of the spleen, congestive or hypertrophic, according to the duration of the disease; and from this morbid condition of that organ as a starting-point, spring all the peculiar symptoms of intermittent fever. Accordingly remedies having the effect of diminishing the volume of the spleen cure the disease. Sulphate of quinine has this power.

If to a person in health a dose of twelve or fifteen grains of this medicine be administered, either in the usual way, or in the form of an alcoholic solution—in which case, says Piorry, it is much more energetic—an immediate and considerable diminution of the spleen is observed. When the organ is enlarged, this effect is still more observable, and it is found to be lessened an inch or more in its long diameter in the space of two or three minutes. This fact is demonstrated by careful percussion, and may be shown experimentally by exposing the spleen of a dog, and injecting sulphate of quinine into a vein, in which case a notable shrinking of the spleen is perceived.

There are, however, some intermittent fevers which do not depend on splenic congestion, and are, therefore, not curable by sulphate of quinine; as, for example, those connected with neuralgia of the intercostal nerves of the left side, with inflammation and displacement of the spleen—all of which are benefited by an appropriate treatment. When, from alteration of tissue, or from thickening of the investing membrane, the morbid condition of the spleen is incurable, then all the quinine in the world will not cause the complete disappearance of the febrile symptoms.

In the course of an acute disease, as typhus fever, periodic exacerbations may occur in connexion with a splenic affection, and may disappear under the use of quinine, although the original disease runs its course.

In intermittent fever, so long as the enlargement of the spleen remains, although the more prominent symptoms have disappeared, the patient will still be subject to many irregular ailments, or to a cachectic state of the system, and will be liable to a relapse, without a renewed exposure to the miasm. The administration of quinine should accordingly be continued until the spleen has completely resumed its natural volume.—*L'Union Médicale*, August 1848.

396.—*Causes of Asiatic Cholera.* By M. Fourcault.—All the usually alleged causes of cholera, such as contagion, poisonous principles in the air, sporules, insects, &c., are insufficient to explain the fact of its limitation, in by far the greater number of instances, to the northern hemisphere. M. Fourcault holds a different view of the cause of cholera, which he considers to harmonize well with the fact in question. He considers this disease to be owing to a want of equilibrium between the electricity of the atmosphere and the terrestrial magnetism, in consequence of which, bodies at the surface of the earth, and among others living beings, are deprived of their electricity. Many other diseases, both of animals and vegetables, may be due to the same cause; in particular, M. Fourcault considers the potatoe disease as having the electrical origin here mentioned.

In proof of this theory as regards the cholera, M. F. writes that the disease in question arises most frequently in the circumstances under which electricity is developed with the greatest difficulty; that is to say within the tropics, in the summer season, at night. The observations of M. Leblond show that in the tropical latitudes, in which cholera most frequently arises, the electrical machine possesses but little power, even on calm days. The same fact has been observed lately in Russia by M. Demidoff, during the prevalence of epidemic cholera.—*L'Union Médicale*, Sept. 12, 1848.

[We cannot enter at length into the arguments by which M. Fourcault defends his theory, which seems, like others of the same author, too vague for general acceptance. Nevertheless, amid the host of speculations to which the cholera has given rise, it may be well to keep those views in mind.]

397.—*Proposed Remedies for Cholera.*—The near approach of this disease has induced many practitioners to lay before the profession the results of their experience in the last epidemic. The multiplicity and often contradictory nature of the modes of treatment recommended, show too distinctly "the absence of rational indications based upon a knowledge of the

pathology of the disease." For an excellent general account of the rational treatment of cholera, we refer to a review, from which the above quotation is taken, in the *Monthly Journal* for March last, p. 679.

A more heterogeneous list could scarcely be conceived than the following, selected from among the remedies and modes of treatment suggested by different writers in the medical journals during the last month:—Calomel and opium, mustard (internally and externally), oil of cajeput, cloves or peppermint, acetate of lead, astringents and cretaceous mixtures, naphtha, salt and water, phosphate of soda, chlorate of potash, rhubarb and magnesia, hot water, cold water, ice, the vapour or hot air bath, bleeding, chloroform, strychnia, Indian hemp, with numerous nostrums and alleged specifics, chiefly consisting of tonics and aromatics.

398.—*Phosphate of Soda in Cholera.* By Dr Twining. — Adopting Liebig's view, that the blood contains no carbonate of soda, nor free soda, but that it owes its alkalinity to the presence of the phosphate of that base, Dr Twining suggests that this last salt might be advantageously substituted for the muriate and carbonate of soda in the *saline* treatment of cholera.—*Prov. Journ.* Sept. 6.

399.—*Mineral Naphtha in Cholera.* By Mr Guthrie.—At a recent meeting of the Medico-Botanical Society, Mr. Guthrie read letters which had been received from Prince Woronzow, the commander-in-chief of the Russian forces in Circassia, and from Dr Andreosky, his physician, detailing a new and successful plan of treating cholera. It would appear that the prince's attention was first drawn to the matter by noticing that a certain regiment of Cossacks suffered but slightly from cholera, as compared with the other troops. On inquiry of the colonel, he learned that the recovery of the Cossacks was attributed to the use of an elixir, called the Elixir of Woronege—a preparation of a somewhat quackish description, the principal important ingredient of which was naphtha. Dr Andreosky, finding the quantity of elixir in possession of the colonel to be but small, determined to try naphtha by itself; he first used it in mild cases of cholera, and of choleraic diarrhœa; proving successful with these, he administered it in the more severe cases with equal advantage, and finally found it effect a cure even during the most extreme collapses. The dose which he gave was from ten to fifteen and twenty drops in a glassful of wine, repeated if the first dose did not remain on the stomach, or if the symptoms required it, which was not often the case. The naphtha used in the Russian army is not the ordinary naphtha of the shops, but the mineral naphtha obtained from Beker, on the shores of the Caspian. It should be of a white or rose colour, and used without previously undergoing the process of distillation.—*Pharmaceutical Journal*, July 1848.

400.—*Sydenham's Treatment of Cholera.* —"Let a chicken be boiled in about three gallons of spring water, so that the liquor may scarce taste of the flesh. Several large draughts of this are to be drunk warm, or, for want of it, of posset drink. At the same time I order a large quantity of the same to be given at several times successively by way of clyster, till the whole be taken in and discharged by vomiting and stool. In this manner the sharp humours are either evacuated, or their acrimony blunted. When this business is over, which requires three or four hours, an opiate completes the cure.

Swan's Observations, 1742, *in Sydenham.*—"The general indications of cure in this disease are—1st, to correct and soften the acrimonious peccant matter, and fit it for expulsion, and, if there be occasion, to expel it by art; 2nd, to check the violent motions in a proper manner; and, 3rd, to strengthen the weakened nervous parts.

"The discharge of fermented and corrupted diet should be encouraged by gentle emetics, lenient cathartics, and plentiful dilution with whey, thin water-gruel, the small chicken-broth recommended by our author, and the like, and afterwards give strengthening medicines to complete the cure."

Dr Maxwell of Calcutta confirms the value of Sydenham's indications of treatment in cholera, from their successful application in his own person. The derangement of the gastro-intestinal secretions, by interrupting the functions of digestion and assimilation, leads ultimately to the fermentation and putrefaction of the contents of the stomach and bowels. Hence arise, according to Dr M., the swelling and increasing uneasiness of the abdomen. Nausea rapidly supervenes, followed by vomiting and purging; and reflex spasms are induced by the acrid matters remaining in the intestines. If these are in the stomach or upper portions of the bowels, the spasms will be in the chest and upper extremities; if in the lower part of the canal, the spasms will be in the inferior

extremities. Examination after death reveals the origin of these spasms in the mucous membrane of the bowels; it is found more or less destroyed in various parts, or covered with ulcerations in protracted cases. The contents of the bowels are in a putrid state; there are no healthy secretions, and not a drop of bile.

An important indication in the treatment of cholera is therefore to blunt the acrimony of the intestinal contents, and, if possible, to obtain their evacuation. Dr M. found that the most effectual, at the same time that it was the most agreeable, mode of answering this indication, was the frequent administration of effervescing draughts.—*Medical Times*, July 22, 1848.

III.—PRACTICE OF SURGERY.

401.—*Case of Double Lactocele.* By M. VIDAL DE CASSIS.—G., aged thirty-six years, of a strong frame and robust constitution, was admitted into the hospital, under M. Vidal, 3d of August 1848. He served in Africa several years, and was afterwards employed twelve years in the mounted police of the Antilles. He had had numerous gonorrhœas, but the testes were never the seat of any inflammation or disease. About eight months since he perceived for the first time that the scrotum was enlarged and painful; the colonial surgeons examined the tumours, but, not having ascertained any transparency, abstained from operation, and the patient returned to France. The tumours, when he was admitted into the hospital, had the special form of hydrocele; they were not by any means translucid, but fluctuation was evident. On the introduction of a trocar, a white milky fluid escaped from each side, and was received in two different vases; an injection of equal parts of water and tincture of iodine was performed. The testes were small, and the spermatic chord perfectly sound; the prostate was also ascertained to be in a healthy condition.

Chemical Analysis of the Fluid—(by M. Grassé, chemist of the hospital, and professor at the School of Pharmacy.)—The fluid, in quantity twelve oz., was white, opaque, with a very slight yellowish tinge; its consistency was exactly that of milk; its taste slightly saline; its density at + 20C. was 1·01. The microscope betrayed the presence of an immense number of very minute corpuscles, more or less spherical, and closely resembling butter globules. This fluid, of an alkaline nature, was not coagulated by heat, but, on being boiled, rose like milk, in consequence of the formation of a thin pellicle on the surface. Acetic acid caused coagulation only when assisted by heat. Muriatic and sulphuric acids coagulated the fluid, and the coagulum was immediately dissolved by the addition of potass. Notwithstanding the addition of ammonia, it preserved its fluidity, a circumstance which would not have been observed if pus had been present. Ether separated a fatty substance which presented the physical characters of butter. Finally, the liquid was found to contain—1. Water; 2. A substance closely resembling casein; 3. A fatty substance analogous to butter; 4. Sugar; 5. Chloride of sodium; 6. Very small quantities of lime, probably in combination with chlorine.

The blood of the patient was also submitted to chemical analysis. The following were the results:—

Water, - - -	730·34
Globules, - -	116·79
Albumen and salts,	149·97
Fibrine, - -	2·99
	1000·09

The difference between the blood of the patient and the average of the elements of healthy blood, consisted, therefore, in a diminution of its water and globules, and a notable increase of its albumen and salts.—*Dr M'Carthy's Report in Medical Times*, September 9, 1848.

402.—*Case of Œsophageal Fistula.* By M. ANSIAUX.—The patient, a robust young man, presented a fistulous communication with the œsophagus, which opened externally on the inferior part of the right side of the neck, in the triangle bounded by the clavicle, sterno-mastoid, and trapezius muscles. Fluid matters escaped from the orifice during the act of deglutition, and an elastic tube, passed along the fistula, entered the œsophagus.

The disease began by the formation, in the site of the present opening, of a small tumour, which, increasing gradually, acquired at the end of three months the size of a hen's egg, when fluctuation was detected. It was opened, and a considerable quantity of sanguinolent pus, mixed with air, escaped. Some days afterwards the patient observed that, when he swallowed *warm* fluids, a portion escaped at the opening. Cold drinks and solid food

passed freely into the stomach. Such is the present condition of the patient. No particular treatment has been employed; but the author proposes, in the event of its not closing soon, to cauterize the fistulous canal. No cause is assigned for the complaint.

The editor of the *Gazette des Hôpitaux*, from which the above case is extracted, cites two instances of this disease which have occurred in his own practice—one in a woman fifty years of age, and in whom the canal closed without the aid of any special treatment; in the other case, a boy of seventeen years, the disease, after long resistance to ordinary means, at length yielded to the assiduous injection of cod-liver oil into the fistula.—*Gaz. des Hôp.*, 7th September 1848.

403.—*Removal of a Tumour from the Sole of the Foot. Local application of Chloroform.* By Mr Spry.—A man, aged twenty-three, had a tumour on the left foot, which had existed for seven years, but for some months had been rapidly increasing. It extended from the centre of the sole obliquely upwards and inwards towards the arch of the foot. It was very painful when touched, and caused great suffering when he attempted to walk. Removal of the tumour being determined on, a portion of lint was saturated with chloroform, and placed on the tumour, the foot being afterwards enveloped in oilskin. In a quarter of an hour pressure could be borne without complaint; the application was, however, renewed. In a quarter of an hour more the operation was commenced, and consisted in dissecting the tumour from the plantar fascia, to which it was firmly attached. The patient said he felt no pain during the division of the skin, but some slight pain at the deepest parts of the incision; this, however, was so slight as not to be worth mentioning.—*Provincial Med. Journal*, August 23, 1848.

404.—*Spina Bifida treated by the Injection of Iodine.*—Professor D. Brainard relates (*Illinois and Indiana Med. and Surg. Jour.*) a case of spina bifida treated by injection of tincture of iodine. The patient, a girl of thirteen years of age, had a tumour at the top of the sacrum, nine inches in circumference, and about three in height, with thin walls. She had been paralytic in the lower members, but within three years had acquired a partial use of them. She was idiotic, and passed both the fæces and urine without regard to place. From neglect of cleanliness, numerous ulcerations and large cicatrices had, from time to time, been formed upon the pelvis and thighs. Under these almost hopeless circumstances it was determined to inject into the sac a solution of iodine, with a view of exciting inflammation and procuring absorption.

This was done on the 2d of December 1847, in the following manner:—A small puncture was made with the lancet on the sound skin, about half an inch from the base of the tumour, and a trocar, of the size of a common knitting needle, carried obliquely into the sac. Through the canula of this, a solution of 1 gr. of hydriod. potass., with ½ gr. of iodine, in 1 dr. of water, was thrown into the sac, and the instrument withdrawn; a sharp pain followed, which soon subsided. Compresses and a bandage were applied, to prevent the escape of the fluid, and the child was laid in bed. There succeeded redness, heat and tension of the tumour, with tenderness to the touch, and some febrile symptoms, for which a cathartic was administered, and evaporating lotions applied to the part. In the course of a week these symptoms subsided, and the tumour became soft, yielding, and diminished in size. Compression, by means of a roller around the pelvis, was then applied, and kept up with as great a degree of force as could be borne; but the filthiness of the patient, and her indocility, prevented this from being applied with regularity. It was frequently removed for twelve hours or more at a time. Still it diminished, and on the 27th of December was about half its former size. At this time a second injection was used of half the strength of the first. This produced but little heat or pain, and the compression was continued. On the 15th of January 1848, the fluid was so far absorbed as to render it easy to press it down almost to a level with the surrounding skin. A spring truss was then substituted, and at the present time the sac lies in wrinkles, the bony opening can be distinctly felt, and there is no increase of swelling when the pressure is removed. Recently there has been manifested a decided improvement in the intellect of the child; the other difficulties remain the same, but, with the removal of the cause, the partial paralysis will, doubtless, gradually disappear. The retention of the natural evacuations must depend upon the development of the intelligence, and the gaining of a control over the voluntary muscles.

In its present condition this case shows that the injection of a solution of iodine, followed by suitable treatment, is capable

of curing an ancient case of hydrorachitis, and (so far as a single case can be taken as a guide) with but little danger. Further experience will be required to determine the strength and quantity of the medicine to be used, and the frequency of the repetition. In younger subjects than this, it is obvious that the dose employed should be not more than a fourth of that used at first in this case.— *Medical Times*, August 26.

405.—*Incomplete Anchylosis.*—Perhaps no cases give the surgeon more annoyance than when incomplete anchylosis follows inflammation or injury in the neighbourhood of a joint, especially the elbow and the finger joints.

This may usually be averted by bending the joint every day to an increasing extent, as soon as the progress of the case will permit. This does not, of course, apply to those cases of articular disease, in which the limb is saved by the long enjoinment of absolute rest, and the production of anchylosis.

The bone-setters have a way with cases of incomplete anchylosis, which very often answers.

They drag, straighten, and bend the stiffened limb with great violence. They thus lacerate the new ligaments and shortened tendons that prevent articular motion; their patient can often immediately afterwards move the limb, and they then invariably tell him that the surgeon has miserably mistaken the case; that the joint was out, and that he has put it in again. I know of several such cases, which affected somewhat the reputation of very excellent surgeons. The surgeon dare not, dreading the results, employ the violence resorted to by these men. But there is no doubt about the value of the treatment. It is a certain rough tenotomy. —*Medical Gazette*, August 11.

M. Fleury, in a memoir lately read before the *Académie des Sciences*, recommends the separate and combined action of the cold douche, and of passive motion in the treatment of incomplete anchylosis.

IV.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

406.—*Two Cases of Cæsarean Section.* Dr Putegnat.—The *first* case is that of a woman, æt. thirty, who, eighteen months previously, had been safely delivered by the forceps, and to whom Dr Putegnat was called in consultation. The cavity of the pelvis was almost completely filled up by a fibro-cellular tumour, which was strongly attached to the ramus of the left os pubis, the obturator, and great sacro-sciatic ligaments. This tumour, equalling in size the head of a nine months' child, had, in its growth, displaced the rectum to the right side, and there was space only to allow the finger to pass between it and the ramus of the right os pubis. It was slightly moveable, and was at first taken for the child's head,—the uterine contractions forcing it firmly on the perineum during each pain. Dr Gueury at once performed the Cæsarean section, and a living child was born. The woman died in forty-eight hours. On a post-mortem examination, the bowels were found highly inflamed, and the lips of the wound in the uterus were gangrenous. The *second* case is that of a woman, æt. thirty-six, in her first pregnancy. On arriving, Dr Putegnat found the arm of the child lying in the vagina. The mother was completely exhausted, and had had convulsions several times. The abdomen was very tender to the touch. The antero-posterior diameter of the brim was so contracted that the hand could not be *forced* through it. The Cæsarean section was immediately performed, and the child extracted alive, but it survived only for a minute, and the mother died on the day after the operation. Dr Putegnat regretted afterwards that he had not performed the Sigaultian section.—*Journal de Bruxelles, and Gazette des Hôpitaux*, 19th September 1848.

407.—*On Difficult Labour from Pelvic Tumours.* By Mr Elkington.—*Case* 1. On visiting this woman, who had been in labour for two days, Mr E. found the head presenting in the first position, and resting just within the brim of the pelvis. There was a firm osteo-sarcomatous tumour in the hollow of the sacrum, offering considerable obstruction to the passage of the head. As the os uteri was fully dilated, and the waters had been for some time drained off, it was deemed advisable not to turn, but attempt delivery by the forceps. This accordingly was done, and with success. The mother made an excellent recovery. Two years afterwards she died from the exhaustion consequent on the increase and spreading of the tumour.

Case 2. In this case there was a large tumour in the recto-vaginal septum, and extending from the promontory of the sacrum to the perineum. The os uteri was pushed very far forwards. An elbow pre-

sented. The child was turned, and delivered with difficulty. It was still-born. The mother made a slow recovery.

Case 3. In this case an ovarian tumour, of considerable size, bulged deeply into the pelvis. The os uteri was high up in front, and two fingers could with difficulty be passed between the tumour and the os pubis. After being in labour for a considerable time, the os uteri became dilated, and the head was forced into the brim of the pelvis. At last the tumour was punctured, and eight ounces of a thick fluid drawn off. The forceps were then applied, but in vain, and, as the child was dead, it was determined to diminish the head. The child was then delivered by the forceps, which had not been removed before the perforation was performed. She recovered.—*Obstetric Record*, June 1, 1848.

408.—*Fainting after Delivery, and without Hemorrhage.* By Professor Meigs. —"A woman may faint immediately after the delivery of the child, and yet not be the subject of any considerable hemorrhagic discharge. This accident is most likely to occur to women in whom the womb has been excessively distended, either with a twin pregnancy or from the accumulation of a great quantity of the amniotic liquor. Such a person having a very rapid labour, and speedy discharge of the after-birth, is likely to faint for want of a due amount of pressure upon the abdominal viscera. The same thing happens to those who are relieved, by tapping, of a large ascitic collection.

"This fainting is caused by diminished tension of the bloodvessels of the encephalon, suddenly produced, whether *a pathemate mentis*, or hemorrhage, or other causes. There can be no such thing as fainting with the vessels full and tense. It is necessary, then, that (after delivery) the danger be obviated by substituting the bandage pressure for the lost pressure of the abdominal walls.

"You must not, however, believe that the newly-delivered woman faints from withdrawal of pressure and tension of the integuments, when she, in reality, faints from loss of blood.

"A woman may faint from hemorrhage after delivery, notwithstanding that you can discover no great distension of the womb, and though there may be no external visible signs of flooding." If, on examining a woman in a fainting state, you find "the womb well down, and the clothes quite unstained, and there be no clots in the vagina nor in the womb, you have a clear diagnostic of deliquium from some cause unconnected with a flooding."—*Females and their Diseases.* Philadelphia, 1848.

The fainting of which our author speaks is noticed at length by several obstetric authors. Denman, in his *Practice of Midwifery*, relates several cases (p. 571). "A woman in labour," says he, "was put to bed, and made an effort to change her situation. She died instantly in the act of moving; but she had previously complained of a piercing pain in her head, and loss of sight. Another was in such a situation that the child was expected to be born the next pain. She threw herself back, and died instantly. Another raised herself in bed to take nourishment, about half an hour after delivery. She fell back, and died immediately."

Again he says (p. 588):—"It will not be amiss to speak of the sudden deaths which sometimes happen soon, or a considerable time after delivery, when there was no apparent reason for suspecting such events.

"In every case of extreme debility, induced by any circumstance which might occur at the time of parturition, great caution was generally recommended that patients should not exert themselves beyond their strength, or do what they seemed able to do without much apparent difficulty. But from a review of these dreadful accidents, of which, in the course of a long and extensive practice, I have seen and known several instances, I think they may be reduced under the following heads:—

"First, when before delivery the patients were subject to frequent returns of spasm or cramp-like pains in the stomach, spreading their influence to the heart, as is shown by the temporary suspension or interruption of the circulation, indicated by the pulse. These symptoms may return after delivery with increased and dreadful violence.

"Secondly, when the patient is very much reduced by loss of blood at the time of delivery, the weakness thereby occasioned remaining a long time afterwards. In these cases, on making any extraordinary exertion, the patient is suddenly overcome, and the powers of the constitution are not able at that time to recover vigour of action sufficient to sustain life.

"Thirdly, when, without any adequate indication of the mischief to be apprehended, a faintness and a difficulty of re-

spiration suddenly come on, and, these increasing, the patient dies unexpectedly. This event is usually preceded by her spitting a very small quantity of blood; and, on examining the body after death, an oozing or effusion of blood in the air-vessels of the lungs has clearly shown the cause.

"Fourthly, in cases of extreme debility from other causes, particularly in the œdematose swelling of the leg, in which there is often a surprising degree of weakness, with much disturbed action of the whole frame, on the patient's making any effort beyond her strength, and perhaps against her inclination, a fatal and sudden faintness is sometimes brought on before an action to which she seemed competent is completed; and death seems more unexpected and instantaneous under these than any other circumstances; in some cases several weeks after delivery. Of this I have seen three instances."

409.—*Puerperal Articular Rheumatism.*—After relating a few cases of this affection, the author lays down the following as the most important practical conclusions to be derived from them:—1. That anti-puerperal and post-puerperal rheumatism should be considered as a formidable malady, demanding instant and serious attention. 2. That there is no single medicine upon which reliance can be placed. Blood-letting and the internal use of quinine, tartar emetic, or nitrate of potash, are the most powerful remedies. The author has found cold water the best and most soothing application to the joints affected with acute rheumatism.—*Annales de Thérapeutique*, Juillet 1848.

410.—*Inflammation and Abscess of the Uterine Appendages.* By Dr Bennet.—The almost universal view of the profession, that this disease is all but characteristic of the puerperal state, and very rarely occurs under other circumstances, our author considers as very far, indeed, from the truth. The disease is not at all rare in the non-puerperal state, and is often confounded with acute or chronic metritis, iliac abscess, or some other pelvic lesion. In the puerperal form of this affection, and owing probably to the increased quantity of fibrin contained in the blood, there is a greater tendency to active inflammation. Hence, if the structures contained in the lateral ligaments are attacked with inflammation it has a tendency to spread to the peritoneal folds and the surrounding tissues, giving rise to the formation of large pelvic inflammatory tumours, abdominal adhesions, intestinal perforations, &c., often ending in death. In the non-puerperal inflammations the purulent collections are more limited; the inflammation seldom attacks the peritoneum, and the abscess generally disappears in a latent manner, bursting into the rectum or vagina.

The most frequent seat of this inflammation is the cellular tissue which separates the peritoneal folds and surrounds the ovaries, round ligaments, and Fallopian tubes. It may be produced by any cause which exaggerates the vitality of the uterine system. It may occur in connexion with ulcerative disease of the cervix, or from a severe fall.

The swelling to which it gives rise may often be felt above the pubes, but an accurate diagnosis can be made only by a vaginal examination. The whole may disappear by resolution, but more generally it ends by suppuration, and the discharge of pus by the rectum, vagina, bladder, or through the abdominal parietes.

The treatment in the acute stage is the same as in ordinary phlegmonous inflammation, only it requires to be more active. Bleeding, leeches, cathartics, and mercurials are the chief means to be resorted to. Dr Bennet places most reliance on the repeated application of leeches to the abdominal parietes, immediately over the seat of the inflammation. In the chronic stage, when the parts are not so tender as at first, the application of leeches internally is very useful.—*Lancet*, Feb. 5, 1848.

411.—*Prolapsus of the Ovary.* By Dr Rigby.—After relating a case of inflamed ovary, where one of its most marked effects was profuse and long-standing menorrhagia, Dr Rigby remarks, that in the case the symptoms varied from their ordinary course, and depended upon the position of the ovary, being much more backwards than usual, and almost approaching to the hollow of the sacrum; hence the inguinal pain generally felt in cases of oophoritis was absent, and, as usual in cases of retroversion, the pain was confined to the region of the sacrum, and greatly increased by the passage of solid fæces through the rectum. This displacement of the ovary downwards and backwards into the recto-vaginal pouch, when in a marked degree, forms a most agonizing affection. In three or four cases which Dr Rigby has seen, the ovary has been found lower than usual, and approaching nearly to the central line. The slightest touch produces severe pain, of that sickening intolerable character which pressure on the testicle produces in the male, and especially when it is inflam-

ed. Prolapsus of the ovary is the name given to this affection by Dr Rigby.—*Medical Times*, August 26, 1848.

412.—*Warts of the Vulva.* By Profesor MEIGS.—It sometimes happens that the vulva is covered with a luxuriant growth of warts. "They are, in certain cases, so abundant as to dispart the labia, filling up the entire sulcus, and rising as a great convex mass of pale cauliflower-looking tumour, quite convex above the general level. Upon separating further the labia, so as to open the sinus pudoris, they are perceived to be small warty excrescences from the mucous body of the mucous membrane, and differ not from the warts on children's fingers except by their greater softness, which depends on their being always bathed with the sort of milky humour of the labial membrane. They often bleed when touched; and, when pinched off with the finger-nails, the broken surface trickles with blood, which soon ceases to flow. I have found that, when the entire labium, right and left, has been quite incrusted with warts as above, I could with the probe separate them any where; for they are distinct from, though in lateral contact with, one another. You will readily include a great number of them in a ligature, which, being tightly tied, they drop off after some hours. The readiest way to remove them is to snip them off, several at a time, with scissors curved on the flat. This being done, and the surface being lightly touched with the nitrate of silver pencil, or with a solution of sulphate of copper, the mucous tissue is not very likely to reproduce them."—*Females and their Diseases.* Philadelphia, 1848.

413.—*On the Mucous Membrane of the Uterus.* By M. ROBIN.—In a lengthened memoir upon the anatomy and pathology of the uterine mucous membrane, Dr Robin lays down the following as the conclusions resulting from his observations. 1. There is a mucous membrane of the uterus, and, far from being excessively thin, especially within the cavity of the uterus, it is there that it has its greatest thickness,—a thickness which exceeds that of any other portion of mucous membrane in the human body. 2. This membrane contains, in its substance, tubular glandules visible to the naked eye when the uterus is unimpregnated. 3. These glands are joined together by a peculiar tissue and by vessels, and it is the union of these different elements which constitutes the chorion of the mucous membrane, although there is in it nothing analogous in exterior anatomical disposition with that of the other internal tegumentary tissues of the body; this peculiar structure is the fibro-plastic tissue, which, normally, is found no where else than in this organ. 4. This mucous membrane is covered hy an epithelium, which alone is the part ordinarily described as constituting the mucous membrane.

M. Robin agrees with MM. Coste and Bischoff, that there is no such thing as the decidua vera and reflexa, as far as these are considered membranes newly formed. The decidua vera is the hypertrophied or otherwise changed uterine mucous membrane. The decidua reflexa is an expansion of the former, or of its folds around the ovule. It is a sort of maternal placenta, whose chief functions continue only as long as the chorion is covered on all its surfaces with villosities, which play the part of the fœtal placenta.—*L'Union Médic.* 7 Septembre 1848.

414.—*State of the Internal Surface of the Uterus after Delivery.* By Dr COLIN. The extensive researches of this author have led him to the following conclusions regarding the state of the internal surface of the uterus after the expulsion of the mature ovum. They agree with the doctrines of Sharpey, Coste, &c., and we believe them to be well-founded.

1. It is not the case that, after delivery, the internal layer of the muscular tissue of the uterus is laid bare. 2. A vascular membranous layer is retained, and covers the muscular tissue. 3. This layer does not differ from the decidua vera, or, in other words, the uterine mucous membrane. 4. This layer is not carried away with the lochiæ, nor destroyed even when the discharges are purulent. 5. Some flakes of membrane, probably detached during labour, are sometimes discharged with the first of the lochiæ; but the essential vascular part remains. 6. This part is the seat of the process set up to reproduce the perfect internal membrane of the uterus. 7. Purulent lochiæ, instead of resulting from the disorganization of this layer, are the consequence of the reparatory process set up in it. 8. This layer regains its natural mucous constitution twenty or thirty days after labour. 9. The new mucous membrane is, at first, pulpy, thicker and more vascular than normally. 10. From this time its elements recontract; and, 11. About the sixtieth or seventieth day it has regained its own proper condition.—*L'Union Médicale*, 29 Aout 1848.

V.—PSYCHOLOGICAL MEDICINE.

415.—*Use of Chloroform in Insanity.* By Dr M'Gavin.—The importance of the subject induces us to give entire the following remarks on cases in the Montrose Lunatic Asylum:—The introduction of chloroform, immediately after the nature of this wonderful agent became known, has constituted the only new feature in what may be styled the purely medical part of the treatment. Its beneficial effects have been conspicuous in many cases in which it has been used during the latter part of the last year. The first two patients selected for experiment with the chloroform, were the most noisy and excited in the establishment. One laboured under acute mania; the other was a decided melancholic. In the first case, all the ordinary and approved means for calming excitement and allaying irritability had been, for two or three days, steadily persevered in without much benefit. It then occurred to me that chloroform might be tried. The patient was accordingly secured, which, by the way, was not a very easy task, and the inhalation commenced. The first inspiration was succeeded by a struggle; but this resulted more from dread on the part of the patient that some mischief was to befall him than from any other cause. After a few more inspirations, he complained of sickness; and in less than a minute and a half from the commencement of the inhalation, the functions of the brain were completely suspended. He remained in the comatose state for a minute or two after the withdrawal of the vapour. While recovering from his state of unconsciousness, he looked confused, and reeled about the room like a person under the influence of some intoxicating liquor. In a short time he completely recovered from the immediate effects of the chloroform, but its soothing influence was conspicuous for the greater part of the day. He became drowsy—slept a short time—and was afterwards less excited, and more collected and rational than he had been since his admission. The chloroform was exhibited from time to time in this case, and sleep almost invariably followed. The patient ultimately got better. The second patient operated on was a woman possessed of a strong suicidal tendency, who had been moaning and crying incessantly for days and nights without intermission. She had not been observed to sleep for nearly seventy-two hours. The chloroform was exhibited in the usual way, and very soon reduced her to a state of unconsciousness. On recovering, she complained of sickness, and vomited; after which she was, at her own request, placed in bed, where she enjoyed a sound and refreshing sleep for upwards of three hours. So sensible was this patient of the benefit she derived from the chloroform, that, when afterwards agitated and overwhelmed with despair, she would implore the medical superintendent to repeat the exhibition. In this she was often indulged. In the first case alluded to, I have very little doubt that the chloroform had a considerable share in conducing to recovery, or, at least, that it paved the way by suspending the functions of the brain, and thus affording rest to its substance. No doubt the same thing is accomplished in similar cases, and might have followed in this case also, by the exhibition of sedatives and hypnotics; but before sleep is procured in this way, days and weeks sometimes intervene. The rapidity with which the chloroform acts, and the consequent saving of time to the physician, and of nervous energy to the patient, are strong arguments in its favour. It is difficult to say, *a priori*, how far the prolonged exhibition of chloroform may be useful in correcting morbid trains of thought in cases of insanity unattended with excitement. Experiments, with a view to the solution of this question, could not but prove interesting.—*Dr M'Gavin's Report of the Montrose Lunatic Asylum*, 1848.

416.—*Insanity cured by Sulphate of Quinine.* By M. Piorry.—Four cases of mania are reported, in which a complete cure was effected in periods varying from twenty-four to forty-eight hours, by the use of this medicine. The cases were recent and acute; they were characterized by various sensory illusions, and by the occurrence of a paroxysm about the same hour every evening. We give the details of one case.

A woman, thirty-five years of age, was brought into the hospital in a state of furious delirium, which rendered necessary the use of the strait-jacket. She imagined that she heard the voices of several persons constantly talking beside her, and in particular of an individual who had excited her jealousy, and of whom she wished to rush in pursuit. The attendants were obliged to tie her down in bed, and the house-surgeon proposed sending her to the Salpêtrière.

Two days afterwards, M. Piorry saw her at his morning visit, and found her very irritable, but succeeded in getting from her some account of her complaint. Her disease commenced with noises in the ears and imaginary voices, followed by delirium, of which she was herself sensible. All these symptoms were much aggravated at night. She was ordered fifteen grains of quinine; no other treatment. Next day there was no delirium, and the day after she was perfectly well.

These cases are very remarkable from the rapidity with which they were cured. M. Piorry considers the delirium of insanity as often induced by certain abnormal sensations, and functional derangement of the organs of sense, and of other parts of the system. In this point of view, it is analogous to various nervous and neuralgic complaints, which are frequently periodic in their attack. Periodicity, indeed, according to his view, is the normal mode of action of the nervous system, and it is therefore not improbable that certain morbid phenomena should obey the same law. In such cases, quinine is indicated from its anti-periodic powers.—*Gazette des Hôpitaux*, August 1848.

417.—*Diminution of the Brain in Insanity.* By M. Parchappe.—The author has endeavoured, in his work on mental derangement, published in 1841, to establish a pathological law, founded on the comparative weight of the brain with a great number of patients—namely, that in simple derangement the cerebrum gradually diminishes in size as the intelligence gets weakened. The author has pursued his investigations since the publication of his work, and has collected many microscopic facts which have confirmed the anatomo-pathological conclusions which he had put forth in his treatise. In comparing the tables which he has drawn up, M. Parchappe found that the mean of the two classes—acute mania and chronic derangement—differed in weight to the amount of two ounces and six drachms for the men, and two ounces and five drachms for the women, or in the proportion of $\frac{77}{1000}$ for the men, and $\frac{81}{1000}$ for the women. The existence of the law of decrease is still more evident, by the comparison of the mean in the four categories of chronic alienation, where the weight of the brain is observed to diminish with the sinking of the intellectual powers, the difference of the mean between acute derangement and the last degree of chronic alienation reaching as high as four ounces and seven drachms, or the proportion of $\frac{114}{1000}$ for the men, and $\frac{108}{1000}$ for the women.—*Communication to the Academy of Sciences, Paris; Lancet*, Sept. 16.

VI.—MATERIA MEDICA AND THERAPEUTICS.

418.—*Tests of the Purity of Chloroform.* By Dr Letheby.—Wash the chloroform three or four times with its own bulk of water; decant the water carefully after each operation; then introduce it into a retort, with about four or five times its bulk of powdered quicklime, and carefully distil it by means of a water or steam-bath. The chloroform thus obtained will be generally quite pure; and it should have the following properties:—

1. It should be perfectly free from opacity.
2. It specific gravity should be near 1.496.
3. It should neither redden nor bleach litmus paper.
4. It should not become opaque when it is dropped into water.
5. It should not occasion any whitening with a solution of nitrate of silver.
6. It should not whiten or coagulate the white of egg.

The last two are very important tests, and they are easily applied. The white of egg should be used as it is obtained from the raw egg; and a little of it—say as much in bulk as a pea—is to be dropped into the chloroform, and allowed to remain there for an hour. If any alcohol is present, it will whiten it.—*Lancet*, September 9, 1848.

419.—*Decomposition of Chloroform.* By Mr Morson.—According to Mr Morson, pure chloroform, under certain conditions, undergoes spontaneous decomposition, which renders it unfit for the purposes of respiration. Air and light appear to be the agents causing this change, which takes place most readily when the chloroform is exposed to the direct rays of the sun, in bottles containing only a small quantity of the liquid, and, therefore, a large proportion of common air. Free chlorine, hydrochloric acid, and probably other compounds of chlorine are formed; but Mr Morson is not at present prepared to state the order of their formation. Fortunately they are easily detected and removed. For the former purpose it is only necessary

to examine the specimen with litmus paper, the colour of which will not be changed if the chloroform be good. If, however, the colour of the litmus be reddened or destroyed, the chloroform must be submitted to a process of purification before using it. The purification may be completely effected by repeated agitation with distilled water, until it ceases to change the colour of blue litmus. He has observed that, if the chloroform be kept under water, the decomposition alluded to does not take place.—*Pharmaceutical Journal*, August 1848.

[Mr Morson's observations do not accord with the experience of our druggists in Edinburgh. See Dr Simpson's paper in this Number, p. 245, note.]

420.—*Cold as a Local Anæsthetic.* By Dr ARNOTT of Brighton.—Every one is familiar with the power of cold to destroy the sensibility of the skin. Dr Arnott asserts, that it may be applied so as to remove all feeling of pain in the integuments when cut; but that the anæsthetic action is limited to the cutaneous textures. Whether it can render much service in practical surgery, can only be seen on trial; but we fear a negative result.—*Lancet*, Sept. 9.

421.—*The Coca of Peru.* By Dr TSCHUDI.—[We have already, on more than one occasion (see *Retrospect* for February and March), presented our readers with extracts from Dr Tschudi's very interesting "Travels in Peru." From the following account of the coca, it appears to supply to the natives of Peru the place held in Europe by tobacco and alcohol, and in Turkey, China, and the East Indies, by opium and Indian hemp. There are probably few nations, however barbarous, who do not possess some kind of stimulant, sedative, or narcotic, which is used to refresh exhausted nature, or produce temporary oblivion of care and vexation.]

The coca (*Erytroxylon coca*, Lamb), is a small tree of about six feet in height, with fine green leaves, and beautiful white flowers. The fruit is a small scarlet berry. The part used is the leaves, which, when full grown, are collected and carefully dried. They are afterwards packed in cloth, and kept scrupulously from moisture, which destroys them. The Peruvians chew the coca. Each individual carries a leather bag containing the leaves, and usually, three or four times a-day, the Indian suspends his work to masticate the coca; one man consumes, on an average, about an ounce and a half of the leaf daily.

The taste is agreeable, slightly bitter and aromatic, resembling that of green tea. The general health of those who use the drug in moderation does not suffer. They have a pale sallow colour, but they work well, and live to a good old age. It is considered by Dr Tschudi to be highly nutritious, as it enables the Indian to endure fasting for a long period, at the same time that his power of undergoing unusual fatigue is undoubtedly increased. The unsteady gait, yellow colour, sunken eyes, trembling lips, and general apathy, readily betray him who indulges to excess.

In its action, it resembles thorn-apple and belladonna in dilating the pupil; but, on the other hand, it differs from these cerebro-spinants in not disturbing the intellectual functions. It has no hypnotic power.

The Indians extol it as one of the best means for relieving the difficulty of breathing experienced in ascending high mountains, and, of its value in this respect, Dr Tschudi adds his testimony from personal experience.—*Travels in Peru.*

422.—*Preparation of Collodion.* By M. MIALHE.—The gun-cotton which is prepared as follows, is, according to Mialhe, that which is best adapted for solution in ether. Carded cotton, 1 part by weight, nitrate of potassa, 20 parts, concentrated sulphuric acid, 30 parts. Mix the nitre and acid in a porcelain capsule, and add immediately the cotton; stir the mixture for three *minutes*; wash it immediately with water, and, when it has become quite tasteless, express it firmly in a cloth, and dry it at the stove. The material thus obtained is less inflammable than the ordinary gun-cotton, and leaves a residue.

Collodion.

Cotton prepared as above,	8 parts.
Sulphuric ether, rectified,	125 ...
Alcohol, rectified,	8 ...

Introduce the cotton and ether into a bottle, and agitate briskly for some minutes; then add the alcohol, and continue to agitate until the mixture acquires the appearance of a homogeneous syrup; pass it through a cloth; lastly, preserve it in a well-corked bottle.

In the preparation of collodion, the presence of water ought to be carefully avoided; and the skin of the part to which it is to be applied, should be thoroughly dried.

Collodion prepared as above directed has been used by M. Malgaigne and others with complete success.—*L'Union Méd.* 7 and 9 Sept.

423—*Ergot of Rye in Retention of Urine.*

By M. Allier.—According to this author:—1. Ergot restores contractility to a bladder which has been paralysed by over-distension. 2. It has been equally successful in paralysis of the bladder following apoplexy. 3. It exerts no beneficial influence over hemiplegic limbs. 4. The medicine must be given in repeated small doses; but these may amount to a drachm and a half per diem.

[A case illustrative of the good effects of the ergot in retention of urine is related by Dr Jeffreys (of Shrewsbury), in the *Prov. Journal* for 1844, p. 44. Dr Ross of Cambusmore, in the county of Sutherland, reports a similar case. See *Monthly Journal* for January 1844. See also Johnson's *Medico-Chirurgical Review* for July and October 1839.]

424.—*On the Inconvenience of writing Directions in Latin.* By Mr Donovan.—[Many physicians, whose classical knowledge is beyond a doubt, have shown their good sense by dispensing with the useless mystery of a Latin direction. It is difficult to conceive what object medical men have, when they write in a language which the patient cannot read that which is intended for his perusal. It is often troublesome, even in plain English, to convey with precision all that is necessary within the compass of a short sentence; and, indeed, many directions are very imperfect, and are only intelligible to the patient, from his having previously received from the physician a full verbal description of what is to be done. Many of the Latin directions in common use are extremely vague, and leave too much to the discretion of the patient; but even when given fully and correctly, they may be inaccurately rendered by the apothecary. Moreover, we have frequently seen Latin directions of a very imperfect character, from the author's ignorance of the words necessary to give full expression to his meaning.

Mr Donovan complains of the practice on account of the great difficulty which the apothecary has in rendering, in the narrow space of a label, the exact intention of the prescriber from a language which frequently admits of several interpretations.]

One of the common nuisances in medical Latinity is the expression "pro re nata," which was once translated by a pharmaceutical *savant*, "for the newly-born infant." We often find that this direction is given for the exhibition of a medicine of no definable power. If a medicine have a peculiar and recognizable effect, such as an aperient, and is directed to be taken "pro re nata," the meaning cannot be mistaken. But when no well-marked and obvious operation can be discovered, which can be expressed as a title, written at the head of the label, according to the custom of apothecaries, the "pro re nata," becomes a difficult phrase to translate, or to be understood by the patient, if translated. Suppose a mixture, consisting of several nervous, antispasmodic, or anodyne medicines, is directed to be taken "pro re nata," it may be intended for many conditions or emergencies, not one of which the apothecary has been made acquainted with. How, then, is he to translate the direction? Several modes are technically made use of. One is "to be taken occasionally." The patient, little the wiser, puzzles himself or the apothecary with questions about the interval between the doses; and he comes to the conclusion that "occasionally" means nothing, and perhaps he is not far from the truth. It may be supposed that the deficiency has been supplied by the prescriber in a private direction to the patient. I wish it were always so; all then would be right. Another translation often used is, "when necessary." The patient exclaims, "To be sure! medicine is never taken but when it is necessary; but when is that?" Unless previously instructed, he is no judge of the intervals of pain, sickness, or suffering, at which it is safe to take his dose. A third translation, "as occasion may require," is liable to the same objection: neither the apothecary nor the patient may know what is the "occasion" meant. The blame of so vague a direction is sure to fall upon the apothecary; and hence the physician is bound, in common justice, to write in English the exact words which are to be copied on the label,—the intention of the prescriber would thus be better fulfilled, and the apothecary relieved from a most embarrassing responsibility. * * *

If prescribers were obliged to write their directions in English, they would soon discover the difficulties under which they place the apothecary by the use of Latin words which have no corresponding English words in common use. Thus applications are directed to be made *faucibus internis*. What is to be written on the label? If the apothecary translate the words by the euphonic terms the *gorge* or the *weasand*, the patient would not be much the wiser. When the application is to be made *faucibus externis*, the case is as bad; for there is no English word to express these parts accurately, neither *throat* nor *jaws* will suffice. We find local remedies directed for the epigastric, hypogastric, umbilical, and hypochondriac regions: none of these parts can be desig-

nated, in the short compass of a label, with any thing like exactness. * *

The word "urgente" is another of the puzzlers which often occurs in prescriptions, and which cannot always be translated by a manageable word on a label. How is "urgente dolore" to be expressed? "when the pain is distressing" is sometimes written: is pain ever agreeable, or otherwise than distressing? Others write, "when the pain comes on;" but the pain may be persistent, and the prescriber may have meant when it becomes very great: yet, with the condition of the patient, the apothecary is supposed to be unacquainted.—*Dub. Med. Press*, Aug. 2, 1848.

425.—*Cod Liver Oil in Lupus.* By M. Emery.—When M. Emery first began the use of cod liver oil in lupus, he gave it in doses varying from 8 to 60 grammes. Not obtaining any decided improvement, he augmented the dose to from 400 grammes to 1 kilogr. These large doses were followed with the most happy results. An amelioration in the character of the sore was often detected after a few days, and complete cicatrization of very bad ulcers has been obtained in two months. Of seventy-four cases of lupus thus treated with large doses of the oil, twenty-eight were dismissed the hospital completely cured, and twelve left with the ulcer almost whole. Of the remainder some were not benefited by a fair trial of the remedy; and others left the hospital prematurely. In many individuals, especially females, these large doses could not be given, on account of the painful symptoms which they occasioned.—*L'Union Médicale*, September 5, 1848.

[During our attendance at the Hôpital St Louis, Paris, we saw several of the cases of lupus, here referred to by M. Emery, under treatment with cod liver oil. Although what we then observed convinced us of the utility of the drug, more especially in scrofulous lupus, we were not prepared for the flattering numerical results above recorded. MM. Devergie and Gibert, physicians of the same hospital, and who had also employed the oil extensively in this disease, were not so certain of its value as their colleague M. Emery. It is right to mention, however, that they prescribed it only in the ordinary doses; now Emery insists on the necessity of the large doses.]

426—*Clinical Notes taken in the Hospitals of Paris and Vienna.* By Dr Alexander Fleming.—*Cod-liver Oil in Rickets.* By M. Trousseau.—During my attendance at the Hôpital Necker, several children affected with simple rachitis were admitted. The rapid amelioration of the symptoms which followed the use of the oil in these cases, was most gratifying to witness; and, indeed, there is no disease in the now somewhat extensive range of affections in which this drug is employed, where its value is more evident.

Simple rachitis appears in children from the tenth to the fourteenth month. This being the period of dentition, it was formerly supposed that the rachitis had some connexion with the constitutional disturbance accompanying that process. There are several considerations opposed to this view, the most important of which are, (1), rachitic children have no teeth; and (2), many children are severely affected with the fever of dentition, without becoming rachitic. But it is also at this period that an important change takes place in the diet of children; and it is to the *premature* weaning that Professor Trousseau attributes the rachitis of infancy; indeed, in the majority of cases the operation of this cause may be established. The interesting experiments of M. Guérin have thrown new light on this point, and leave little doubt in my mind of the connexion between premature weaning and rachitis. When to young animals other food than the mother's milk is given, the stomach is unequal to its duty—the functions of digestion and nutrition, and, more especially, the nutrition of the bones, which is especially active at this period, are disordered. The bones become soft, and rickets is developed. M. Guérin selected a number of puppies. Some of these were allowed to take the mother's milk; the others were prematurely weaned. Of the latter again some were fed on bread and milk, and the remainder on flesh. The first and second sets grew strong and healthy; but the third set was soon attacked with diarrhœa, became emaciated, and finally *rachitic*.

M. Bretonneau, in 1829, was the first to make known in France the utility of cod-liver oil in this affection; but it is only of late years that it has come into extensive use, chiefly in consequence of the strong recommendations of Trousseau. The dose is at first a dessert-spoonful three times a day, increased gradually to a table-spoonful. As young children have little sense of smell, they take it readily, indeed often with avidity. The first sign of improvement is the diminution of the acute tenderness of the skin, which is the source of so much agony to the child in this disease. This may appear in forty-eight hours from the commencement of the treatment; and

a decided change in the state of the osseous system may be observed in from four to six days. I have seen a child who could not be touched without giving indications of acute pain, and whose legs were too soft to sustain the body, running about the ward in from two to three weeks. In Mollities ossium, Trousseau said that he had employed it with nearly equal success, but its action is slower.

Bretonneau denies any special virtue in the cod liver oil, which is expensive in France, and uses in preference common whale oil. Others maintain that they have used olive oil, poppy-seed oil, and common lard, with the same excellent results as when the cod-liver oil is employed.

The observations of M. Marchal, recorded at p. 183 of this Retrospect, tend to show, however, that the iodine is by no means a neutral ingredient in the cod-liver oil, and the phosphorus and salts of lime which it contains probably play an important part in the cure of rickets.—(*To be continued.*)

427.—*On the internal use of Turpentine Oil in Hæmorrhages.* By Dr Percy of Lausanne.—The author, after noticing the fact that several writers—Adair, Nichol, Johnson, Warneck, Copland, Ashwell, and Pereira—have spoken of the efficacy of the essential oil of turpentine in hæmorrhagic diseases, observes that this remedy seems nevertheless to be little used by practitioners. In the case in which he first made trial of it, hæmaturia of two years' standing, in an old man of eighty, was stopped in twenty-four hours by eight drops of oil of turpentine, and did not return. He has since used it in different cases of hæmorrhage, and always with a favourable result. The cases in which its use is indicated are those of passive hæmorrhage. It must not be employed where there is an active determination of blood, and where the pulse is full. When the discharge of blood is the consequence of organic disease, as of disease of the uterus, or of tubercular disease of the lungs, the action of the remedy is not so efficacious; but the author has seen a case of scirrhus of the womb, in which the hæmorrhage was for some time stopped by this remedy. Its action is very rapid, an effect being often manifest in a few hours, after one small dose. In order better to ascertain its power, he used it alone, without having recourse to local astringents or cold applications, where he could do so without fear of endangering the life of the patient. He has employed it most frequently in cases of menorrhagia and epistaxis; but he mentions, that it appears to him to be particularly applicable in the cases of hæmorrhage attending typhus. He noticed the fact that turpentine exerts different actions on the body according as it is taken in large or small doses, being more readily absorbed in the latter case; and, as its beneficial action in cases of hæmorrhage must depend on its being absorbed, the doses ought to be small. He has always found a dose of from eight to thirty drops sufficient. The best vehicle is almond emulsion, with a little gum arabic. When there is pain in the abdomen, a few drops of laudanum may be added.—*Royal Med. Chir. Soc. Meeting, London.*

428.—*Carbonate of Ammonia in Chronic Bronchitis.* By M. Guérard.—From extensive trials made at the Hotel Dieu, Paris, the author finds that the employment of carbonate of ammonia in chronic bronchitis, accompanied or not with emphysema, is very advantageous. It facilitates the breathing, favours expectoration, and gradually secures permanent improvement. The formula of M. Guérard is carbonate of ammon. 18 to 36 grs.; syrup of tolu, ½ oz.; camphor water, 3 oz. A table spoonful every three or four hours. The treatment is continued during two or three weeks.—*Annales de Thérapeutique*, Vol. VI. p. 50.

[Giacomini recommends the carbonate of ammonia in asthma and chronic catarrh. —*Mat. Méd.*, French translation, p. 54.]

429.—*Quinine in Acute Diseases.* By M. Guérard.—We noticed, on two former occasions, the alleged general prophylactic powers of quinine in febrile diseases.—(See *Periscope*, January 1848, p. 519, and *Monthly Retrospect*, 1848, p. 149.) For several months past M. G. has employed it extensively, and has been led to the conclusion, that in all cases of acute disease (including pneumonia, erysipelas, fever, small-pox, &c.), in which cerebral symptoms, as delirium and subsultus, appear early in the course of the attack, quinine is a most valuable remedy. Five to ten grains every four hours are given for two or three days. The delirium, &c., gradually disappear, the pulse is improved, and the whole character of the case is said to be remarkably changed for the better.—*Annales de Thérapeutique*, Vol. VI. p. 56.

430.—*Blindness from the Use of the Sulphate of Quinine.* By Dr M'Lean.—The fact that sulphate of quinine, in large

doses, will sometimes occasion blindness, has received additional illustration by the publication of several cases by Dr John M'Lean. The "heroic" treatment pursued by the Americans in this instance, as in some others, is calculated to afford the profession important information. In one case, about sixteen grains of the medicine were administered hourly for a low remittent fever, until nearly an ounce had been taken. In another case three grains were given hourly for three days. In another, three drachms were taken in thirty-six hours, in six-grain doses. In these and other cases perfect blindness was the result, the amendment from which was very slow indeed; in one instance, there was a gradual improvement during the first year; in another, the sight was partially restored after some weeks, but continued imperfect.

Trousseau also relates a case in which, after a dose of forty-eight grains of sulphate of quinine, the patient became temporarily blind and deaf.—*Illinois and Indiana Med. and Surg. Journ.*, Dec. 1846, and *Ranking's Abstract.*

431.—*New Vehicle for holding Camphor in Solution.*—Sir James Murray proposes a new vehicle for holding camphor in solution, which may be exhibited in doses considerably greater, and with less irritation, than it has hitherto been given. It was known that camphor is insoluble in water, and that when given in almond emulsion it very readily separates on the addition of water, and that the same separation takes place on adding water to a solution of camphor in spirits of wine. Now, Sir James Murray has found that the fluid magnesia was capable of dissolving camphor to the extent of three grains to the ounce of the solution, and that adding water to the mixture did not cause any cloudiness or separation of the camphor. An ounce of this solution contains three grains of camphor, which appears perfectly clear, like water; and, if any thing is added to the solution capable of withdrawing a portion of the water, such as dry common salt, a rough estimate may be formed of the quantity of camphor which it contains. To employ camphor as a sedative, it must be given in large doses; but it is also necessary to have it perfectly dissolved. It is obvious, then, that given for this purpose, it would not do to employ the camphorated spirit, nor will the solution in emulsion be any better, as it readily separates from it in the stomach. We have therefore, he observes, a menstruum in the fluid magnesia, which answers better than any method hitherto known.—*Dub. Med. Press*, Dec. 15, 1847; and *Ranking's Abstract.*

VII.—FORENSIC MEDICINE AND TOXICOLOGY.

432.—*Case of Malapraxis in Midwifery.*—It would appear from a summary of the evidence, derived not from newspapers but from an authentic source, that Mr Flint was called to attend the deceased, Elizabeth Riley, while in labour. On examining the woman three times, he said it was a cross-birth, and he had turned it. About seven hours afterwards, having sent for his instruments, he employed them, as it appeared, for about an *hour and a half*, under the bed-clothes. He declined having further advice, although this was suggested to him by the friends. The deceased appeared to sink, and died, undelivered, about twelve o'clock, *i. e.* between two and three hours after the accused commenced his manipulations with the instruments under the bed-clothes. He told a witness that he had brought one child into the world, and there would be another in a few minutes. An attendant, perceiving that the woman was dying, turned the clothes off, and saw "a leg and foot, an arm and a hand, and something like intestines, hanging out nearly a foot." There was also an open penknife lying on the bed covered with blood, and for which the accused had previously inquired. The child which Mr Flint said he had brought into the world turned out to be a portion of the woman's bowels, with a part of the vagina and uterus attached to it; this was found under the chair in which the accused had been sitting! The inspection showed that there was no deformity of the pelvis; that a hand and foot of the child were protruding, the latter having on it a deeply incised wound. With these there was projecting a loop of intestine, which had passed out through the lower part of the uterus. The perinæum was destroyed, and the orifices of the vagina and rectum were continuous. The uterus was ruptured at its anterior inferior portion; the head was lying on the left superior side of the abdominal cavity, having protruded through an extensive laceration or rupture of the uterus in that position. There were several wounds about the body of the fœtus and the posterior walls of the uterus; and

the abdominal cavity throughout showed proofs of extraordinary instrumental and manual violence.

We have been obliged to enter into these horrible details in order to make our comments intelligible. At the trial of the accused, the line of defence, by cross-examination, was, that the deceased female had died from a rupture of the uterus, and that it could not be determined whether the rupture had arisen from the *manual interference* of the prisoner, or from *natural causes*. It was suggested that the injuries to the viscera might have operated secondarily in accelerating death; but that the rupture of the uterus was the real cause. Upon this the judge stopped the case, and summarily directed an acquittal.

There can be no objection to the legal principle, that every accused person should have the full benefit of every reasonable doubt. On the other hand, the lives of the public require to be protected, especially when, as it is alleged in this instance, persons not legally qualified to practise will take upon themselves the responsibility of attending a female in labour. Now, the question here was, as it appears to us—Did this patient die from the gross ignorance or criminal inattention of the person who undertook to attend her in a medical capacity? Would she have died but for the want of knowledge on his part to adopt the proper measures for her delivery? An accident might occur to any one; but the plan pursued by the prisoner appears to us to have been in violation of all professional rules, and such that could not fail to lead to the death of any female so situated. That the uterus, near the seat of the rupture, had been improperly interfered with by the violent use of instruments, was rendered in the highest degree probable from the discovery on its posterior wall of several wounds, evidently instrumental; some being superficial, and others *having passed entirely through the organ*. As the primary cause of death was assigned to rupture of the organ, we consider this to have been a most important fact for the consideration of the jury; but no further evidence was allowed to be gone into, although, as we are informed, some accoucheurs of great experience were present to speak to the probable cause of the rupture and death. In the cross-examination of Mr Simkins the usual ingenious plan was adopted of extracting an answer to a general question, and then making it applicable to a particular case. Ruptures of the uterus may undoubtedly occur under the hands of the most skilful, and lead to death; but the question here was, whether, on this particular occasion, the rupture had not proceeded from gross ignorance and unskilfulness in the use of instruments. The wounds upon the uterus, evidently caused by instruments which had passed through it, furnished *primâ facie* evidence against the suggested occurrence of the two extensive ruptures from *natural* causes. We think additional evidence should have been received, and the jury have been allowed to form their judgment from the whole of the facts, whether a sufficient amount of gross ignorance on the part of the accused had not been proved to account for the death of the woman. As it was, the case was hastily stopped, the facts were not laid fully before them, and the only inference that we can draw is, that, because a fatal injury may occur spontaneously under the hands of a skilful man, or be occasioned by the unskilful use of instruments, its origin will be imputed to natural causes, in spite of evidence from wounds through the walls of the uterus, and involving the surrounding viscera of the abdomen. We do not think such verdicts likely to give satisfaction; and, as the law thus declares itself to be inoperative for the protection of females who have their bowels removed by such extraordinary instrumental manipulations with penknives, &c., during a delivery, it is the duty of the colleges to take the matter in hand, and to insist that the practice of midwifery shall be entrusted only to those who are really qualified to practise. We fear, however, there will be great difficulty in procuring the enactment of such a law, although its necessity, for the preservation of the lives of the poor class of females, is rendered apparent by the not unfrequent occurrence of these disembowelling cases.—*Medical Gazette*, August 25, 1848.

433.—*Poisoning by Belladonna.* By Mr Jackson.—"T. G——, aged seventy-five, a man of spare habit, had a box of extract of belladonna, containing five drachms, given him with a view to its being spread as a plaster for his chest. The poor old man mistook the verbal directions, and took a portion of the extract. The dose taken was represented, by a female who was present at the time, as so small as not to exceed four or five grains. Whether this person was mistaken as to the quantity taken is uncertain. This occurred about six o'clock in the evening. In a short time the symptoms became manifest, and at seven he had lost the power of articulation, and presented the general appearance of a person seized with slight

paralysis. He was quite unable to stand or walk, and his limbs were in a state of tremor and agitation. He became cold, and nearly approaching a state of insensibility; the eyes had a wild, vacant appearance; the respiration was laborious, and occasionally stertorous; and he moved the body almost incessantly backward and forward, as if his inward suffering (not otherwise expressed) was very great. At ten o'clock, the temperature of the body had increased; face swollen; mouth and throat extremely dry; and insensibility more complete. Castor oil had been given, but was rejected. One of the attendants stated that nausea prevailed at various times. No active delirium was manifested, but from the general appearance of the eye and features, no doubt that peculiar derangement existed, subdued partially by the pressure upon the cerebral organ, so as more nearly to approach the character of apoplexy. At six the following morning, he appeared considerably exhausted, but had still sufficient power to take some wine and water, and for the first time indistinctly uttered a few words. His mouth and fauces at this time (to give the language of an attendant) were as dry as a chip. His face was so much swollen and red, as to quite change his usual appearance. His daughter remarked that the wrinkles of old age had disappeared, and he appeared much fatter than usual. Between nine and ten in the morning, he appeared quite exhausted, and he died at eleven, being seventeen hours after having taken the extract."

The post-mortem examination showed the presence of great congestion of the brain, particularly at the base, and of the medulla oblongata, together with considerable (serous?) effusion. There was also congestion of the lungs, and dark discoloration of a portion of the great curvature of the stomach.

The points of interest Mr Jackson considered to be—the rapid accession of the symptoms, particularly those affecting the voice; their resemblance in some respects to the early progress of congestive fever; and to the fact that the chief action of belladonna was on the medulla oblongata. The author does not hesitate to say that death was caused by belladonna, acting as a poison; yet the jury returned a verdict of "Death from natural causes."—*Proceedings of Prov. Med. and Surg. Association.*—Bath Meeting, 1848.

434.—*Poisoning by the Use of Emerald Green in Confectionary.*—An inquiry has been instituted at Northampton, before the county coroner, Mr Hicks, respecting the death of Mr William Cowfield, an accountant, who, with twenty others, was poisoned at a public dinner, given on the 7th of June. The magistrates, hearing of the fatal result, directed the police to seize the remnants of the dinner, and all the cooking utensils, in order that they might undergo a close examination by the medical gentlemen. Mr Sharp, one of the magistrates, questioned Franklin, the pastrycook, who provided the dinner, as to what he used in the colouring matter for the blanc-mange. He replied, emerald green. He was told that it must be poison, as all mineral greens were poisonous. He remarked that he had frequently been told so, but he did not know it of his own knowledge, as he thought it was extracted from spinach. He then added that Randall, his assistant, made the blanc-mange and jelly, and he made the soup. Messrs Faircloth and Bryan, surgeons, who made the *post mortem* examination, deposed to the highly inflamed state of the stomach and intestines of the deceased, the result of some violent irritant poison. Mr Greville, who analyzed a small portion of the colouring matter left on the blanc-mange, stated that he had succeeded in detecting copper in it. The whole of the evidence having been taken, the coroner addressed the jury, and at some length explained the law as it applied to the case. The jury then consulted together, and at eleven o'clock at night returned a verdict of manslaughter against Edward Franklin and Edward Randall. The necessary documents were then made out and signed for their trial at the ensuing assizes. The deceased was sixty years of age.—*Pharmaceutical Journal*, July 1848.

435.—*Death from a Foreign Body in the Trachea.—General Hospital, Vienna.*—The subject, a corpulent and healthy-looking woman of middle age, was brought to the hospital dead, who, from the account of the bearers, had been quarrelling, and received a blow on the head, from which, after some convulsive movements, she quickly died.

When placed on the table, there was no lividity of the face, nor other peculiarity of visage; there was a superficial lacerated wound of the front of the scalp, about an inch and a half in length, and situated over the central part of the frontal suture, its anterior edge somewhat bruised, and the posterior slightly torn from the pericranium. There was slight ecchymosis around the wound, but no injury of the skull, which, indeed, was nowhere denuded of the pericranium, and on being

laid open, displayed the brain and base of skull altogether uninjured. The abdominal and thoracic viscera were then laid bare, and according to the rule in examining all bodies here, whatever the nature of the case may be, the trachea was slit open, and to the surprise of all, exposed at once the cause of death. A plug of boiled saur-kraut, nearly an inch in length, was so firmly impacted in the trachea, an inch and a half below the larynx, that it must have instantly destroyed all respiration; a few strips of the vegetable were also found in the ventricles of the larynx, and the pharynx was likewise nearly full of it; the stomach contained some food, and, like the other viscera, was quite healthy.

The explanation of the case appears very simple; the body with which she had been struck must have been blunt, and, as usually happens, slipped obliquely from the skull, making a mere superficial wound, without doing further mischief there. She was, however, eating at the time, and there can be little doubt that the blow was unexpected; and, as occurs in all cases of injury and fright, it caused her to take a sudden and violent inspiration, and, in consequence, produced the sucking in of the vegetable she was about to swallow. The firm manner in which it plugged up the trachea, demonstrated the great force with which it had been drawn in, and the insufficiency of the convulsive efforts that followed to dislodge it. Had the trachea not been examined (and how often is it neglected), the cause of death would no doubt have been at once set down as the result of the direct effects of the blow upon the brain; and as I have not heard the issue of the legal proceedings, I cannot say how far,—if, indeed, in any degree,—the discovery of the true cause of death lightened the legal guilt of the prisoner in the eyes of the Viennese jurists. —*Lancet; Dub. Med. Press*, September 1848.

436.—*Laceration of the Heart and Pericardium, with other Internal Lacerations, and without External Wound.* By M. Casper.—A man was thrown with great force from a cart descending a hill, and, striking against a tree, was killed. There was no appearance of external injury. There were ecchymoses between the deep muscles of the back. One of the spines of the vertebræ was broken off, and lay loose in the soft parts. The spinal marrow was uninjured. The left side of the thorax contained 30 oz. of blood. The pericardium was ruptured, the heart torn from the great vessels, and lying loose in the depth of the thoracic cavity. The left lung was nearly torn across, and the right lobe of the liver had a deep laceration. —*Casper's Wochenschrift*, and *Schmidt's Jahrbücher*, 1848, No. 7.

[So far as we know, this case is unique. A near approach to it, however, is found in a case related by Dr Gairdner, in the *Medico-Chirurgical Transactions of Edinburgh*, Vol. I. p. 662. This case is not mentioned in works on medical jurisprudence. A girl, ten years of age, was killed by the wheel of a cart passing over her body; there was no external lesion, except a very slight extravasation under the left nipple. The heart was ruptured. "Both ventricles and both auricles were laid open by the laceration, and the septum torn to shreds. About one half of the substance of the heart had burst a way for itself through the pericardium into the right cavity of the thorax, where it was found immersed in a very large quantity of grumous blood, and still attached to the other part by means of a small portion near to the apex, where the cart had stopped." The ribs were uninjured. Dr Geoghegan of Dublin, relates a case in which the heart was ruptured by external violence, without any external indication or any fracture of the ribs.—(*Dublin Med. Press*, II. 271.)

VIII.—DIETETICS, HYGIENE, AND MEDICAL POLICE.

437.—*Comparative Physiology and Pathology of the Human Races.* By M. Boudin, Principal Medical Officer of the Army of the Alps.—The author has insisted in several memoirs, formerly published by him, on the impossibility of the acclimatisation of Europeans when engaged in labour (*à l'état de travailleur*) in different quarters of the globe. He now addresses himself to a consideration of the question, as to whether this is equally true of other peoples and races as it is of Europeans, in the hope of throwing some light on the comparative physiology and pathology of different human races. Facts already known seem to demonstrate, that the different races of the human family obey special laws, in relation to births, deaths, and pathological tendencies. The French and British governments have already availed themselves of the partial experience of this, to diminish the mortality among their national troops in certain colonies, by adding to their armies local

auxiliary corps recruited from among races adapted to the climate.

The mortality among the British troops in the Antilles from 1817 to 1836, is shown by a tabular statement to be among white troops 80 per 1000 whilst among the black troops it was only 40 per 1000. This has led to the substitution of a black for a white regiment, and by this prudent measure, conjoined with a frequent change of the white troops, based upon a practical renunciation of the hypothesis of acclimatisation, an unexpectedly great diminution of mortality has been accomplished.

This is proved by a statement from a paper read by Lieut.-Col. Tulloch to the Statistical Society in 1847, quoted by M. Boudin, but which we regret not to have seen. From this document it appears that the mortality per 1000 among the British white troops in the West Indies, previous and subsequent to 1816, was as follows :—

	Jamaica.	Lesser Antilles & Guiana.
Before 1836,	128·6	82·5.
In 1844 & 1845,	29·7	59·1.
Annual saving,	98·9	23·4.

These facts are worth more than all the best reasonings for showing the high social interest of the study of the comparative physiology and pathology of the human races.

General Kleber, in 1801, having, during the war in Egypt, sanctioned the plan of employing negroes as recruits for the French army, M. Boudin suggests the propriety of the French government adopting the plan of negro regiments in some of their colonies. He quotes the following table to show that this measure should not be adopted indiscriminately, as the European race in some stations (though not engaged in labour, it is true) maintains a fair duration of life :—

Mortality per 1000.

	French Troops before 1838.	Slave Population of all ages from 1836 to 1842.
Senegal, . .	123	No returns.
Guadaloupe, .	101	24
Martinique, ·	102	31
Guiana, . .	32	33
Isle de Bourbon,	25	32

The author then quotes, in support of his proposal, tables showing the favourable results obtained in the British service by the employment of local native corps.

[It would be an unnecessary sacrifice of space to quote these various tables *ad longum*. They are derived from the official reports of the army presented to Parliament.]

But it is not merely in respect to the amount of mortality that the various races differ from each other ; they differ also in respect to the cause of death. Thus at Sierra Leone, whilst, on the one hand, the general mortality in the negro troops is to that in the white troops as 1 to 16, the deaths by gastro-intestinal diseases are as 1 to 8, whilst the losses by fevers are as 1 to 200.

At the southern extremity of Europe, on the contrary, at Gibraltar, where a negro regiment was stationed for nearly two years, commencing in 1817, the proportional loss of white and negro troops offers quite opposite results. The deaths among the whites being 21·4, whilst among the negroes they were 62 per 1000.

From this fearful mortality among the blacks at Gibraltar, on one hand, and the ascertained fact, on the other, that the negro race in Egypt is maintained only by incessant immigrations, M. Boudin doubts the correctness of assertions which have been made on theoretical grounds, that the negro race might be acclimatised in Algeria. M. Boudin next quotes long tabular statements of the amount and causes of mortality among the British and Sepoy troops in India. From these it appears that the only class of diseases which are more fatal to the native than European troops is dropsies, which is to be accounted for by the liability of the former to, and the exemption of the latter from, *beriberi*. Two English soldiers only are mentioned in the official documents as affected by this disease, whilst among the Sepoys there were 1145 admissions, and 158 deaths from it.

The next tables quoted by M. Boudin refer to thoracic diseases. These show that the admissions for acute thoracic inflammations and catarrh, are among the Europeans, to those among the Sepoys, as 216 to 19, and the deaths as 4 to 1·4 ; whilst, in respect to phthisis, the proportions are as 18 to 12, and 3 to 1·8 respectively. Whilst, therefore, "inflammations of the lungs and catarrh" prevail with very unequal intensity among the two races, the prevalence of phthisis is nearly on a par, which he regards as a fresh evidence against the theory of the tubercular diathesis being a chronic species of pneumonia. Again, in comparing the prevalence of phthisis in the Madras presidency with what occurs among the troops in the United Kingdom, it appears that the deaths from this cause among the troops at home, are from five to twelve times greater than in the Madras presidency.

Taking this in connexion with the enormous prevalence of marsh-fevers in the latter, amounting to upwards of 18,000 cases in six years, he thinks the facts well worthy of the consideration of those who have bestowed attention upon the subject of the antagonism of marsh-miasma to phthisis.—*Gazette Médicale*, No. 29, July 1848.

438.—*Brandy Drinking, and its Treatment by the Method of* Dr Schreiber. —The Temperance Society of Stockholm in 1843, requested the medical men of that capital to make known, and try this system, and especially to report as to whether it might be practised without the superintendence of a medical man. The physicians resolved to publish all the details of the treatment, and to encourage experimental trials of it, at the same time they expressed their conviction that it could not safely be followed except under daily medical superintendence.

Dr Schreiber's method consists in isolating the brandy drinker, by shutting him up in a room, giving him for drink a mixture of one part of brandy, with two of water, preparing all his food with water mixed with diluted brandy, and giving him brandy in his coffee. Under this alimentation, the patient falls into a continuous drunkenness, and sleeps a great deal. At the end of five days, his food and drink begin to disgust him, and he asks for a change. If this is acceded to, the cure is spoiled. On the contrary, this regimen must be persevered in, until the patient cannot swallow either food or drink, and cannot even bear the smell of them. The cure may then be regarded as complete.

Dr Landblad had tried this system on the soldiers in the garrison of Gotheberg, and communicated the following results to the College of Health. As he has observed that the treatment frequently occasions cerebral and thoracic congestion, he advises to administer at the beginning an emeto-cathartic dose, and afterwards to use every three days an ounce and a half of Epsom salts.

A room in the garrison hospital was specially appropriated to this purpose, to which no one was allowed access. Only at the time when they were carrying in the brandied food, and which smelled very badly, some soldiers were admitted as spectators, and the mere sight made a profound impression. The warmer the food is, the less unpleasant is the smell, and the more readily is it taken. The shortest treatment was seven days, the longest nine. During the three first days the appetite was increased, and thirst moderated; the fourth day the thirst became rather sharp, and the appetite declined. The following days the patients could not eat without vomiting, and the thirst was unappeasable. The general state of the patients was very variable; some were depressed and mournful; others violent and excited, and wished to make a forcible escape from their restraint, so that it was sometimes necessary to put them under guard. Of thirty-five soldiers who were subjected to this treatment, three only recommenced their drunken habits; and in two of these it was interrupted, because in one there supervened an attack of convulsions, in the other vomiting of blood. The others never felt any propensity to return to the use of brandy, although some of them had previously been punished for drunkenness.

M. Sonden, who thinks that this system merits all the attention of practitioners, says, that it is attended with no bad consequences; that, on the contrary, the appetite increases and the health improves. He adds, that, to the credit of the army, several soldiers voluntarily submitted to this treatment, in the hopes of getting rid of their habits of drinking.

Dr Retzius, regimental surgeon, has, under the supervision of the battalion surgeons, made an extensive trial of this method in the garrison of Stockholm, of which the following are the principal results:—The treatment was never adopted by compulsion, as its effects were comparatively unknown. Those who voluntarily submitted to it were subjected to a rigid examination as to the state of the thoracic and abdominal viscera, and as to the existence of any predisposition to apoplexy, or cerebral congestion. They were carefully watched, and the state of their health accurately noted. The first trials were made in May 1844, and the treatment was commenced without any preliminary preparation. For the first five or seven days the new regimen pleased the patients much; they were in a constant state of joyous inebriety, and there was rarely vomiting at this stage. The pulse was full and not frequent, the tongue red and moist. They all complained of a sense of burning in the stomach. The bowels were regular, the urine red and scanty, the skin soft. The pupils in a state intermediate between contraction and dilatation. At the end of this period, the tipsy excitement ceased, the patient came to himself, but remained depressed and silent. The sense of burning in the stomach had become acute, and the thirst insatiable. The tongue was yel-

low on the edges, the stomach retained neither food nor drink; all was immediately rejected by vomiting. The most of the patients ate no more. The pulse was small, feeble, and unsteady. At the end of from two to four days more, this state gave way in its turn, and the patients recommenced eating and drinking. Some of them were again affected by drunkenness for six or eight days, and, when they regained their senses, they always retained an invincible repugnance for the aliments prepared with brandy. Six men maintained till the end of the treatment a slight delirium, which then subsided spontaneously. The duration of the treatment varied from six to twelve days, but some required twenty days, including the period of convalescence. This consisted in the new regimen which was substituted for the brandy system, from the time when it produced such a complete disgust that even the smell sickened the patients. At this time they were allowed pure water in small quantity, milk, soups, or gruel, and subsequently other aliments, but always in small quantities. The treatment was stopped in seven cases; twice from convulsions, three times for hæmatemesis, once for hæmoptysis, and once for a blow on the head, which the man got from one of his drunken fellow patients.

No other bad results followed; on the contrary, the patients appeared to be improved in health. One was affected by melancholy, which subsided under the use of laxatives. In one man the treatment was stopped on the fifth day for threatened cerebral congestion, with symptoms of abdominal irritation. It was cured by cold to the head, and purgation by castor oil. He had, however, completely lost his taste for brandy.

In the whole garrison, 139 men were treated by Schreiber's method. Of these, 128 were cured of their drunken habits, four relapsed into the vice, and in seven the treatment was interrupted. Most of the patients were from twenty to twenty-five years of age.

This treatment presents dangers and difficulties, and cannot be successfully or safely pursued, as the above cases show, without the constant surveillance of a medical man. Moreover, such successful results as the above must not always be expected. There may be relapses, and recurrence to old habits, after a more or less prolonged apparent duration of cure; nevertheless this method of treating so common and degrading a vice, merits the attention of physicians.

It is evident, moreover, that in this country [France], and under the laws which guarantee the liberty of the subject, this method cannot be pursued, except with the distinctly-expressed assent of the patient.—*L'Union Méd.*, Aug. 1, 1848.

[It is remarkable that in the above reports no notice is taken of the absence or presence of tremors. It seems to be a system of cure, on a kind of homœopathic principle, by inducing on purpose a state of delirium tremens. Apart from the hazards which the statements of Dr Retzius show to be neither few nor trifling, we desiderate some further account of these patients before we can judge of its efficacy. We should doubt the eventual permanency of the cure produced by such means. To reform the drunkard, the moral as well as physical man must be brought to feel a disgust for his brutalizing and enslaving habit. It may prove successful in young subjects, and, if so, would so far be a blessing; but would most probably fail, where it did not prove fatal, in the old confirmed dram drinker. Moreover, being founded on no higher principle than disgusting the patient with one form of stimulant, although it may have some success in Sweden, where the chief *pabulum ebrietatis* which soldiers can procure is spirit, it would fail in this country, where strong ale and porter are so accessible, and would only drive the debauchee from Glenlivet and "Old Tom," to Edinburgh ale or Meux and Co.'s entire.]

439.—*Inula Dysenterica in deficient Secretion of Milk.* By Dr Wolffsheim of Brunswick.—This plant is a frequent European native in moist localities, and is mentioned in some of the older continental works under the name of *herba conyzæ mediæ*. It should be gathered when in flower in August. Dr Wolffsheim has been in the habit of giving it to lying-in women in whom the secretion of milk is defective, and it has proved successful without effecting in any way the general health of the patient, the mammary secretion being strikingly increased in a few days. He gives it in the form of tea, to the extent of three to four cups daily. For a similar object, the freshly cut herb has been mixed with the fodder of cows which have too little milk.—*Casper's Wochenschrift in Schmidt's Jahrbücher*, No. 5, 1848.

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

VOL. I. NOVEMBER, 1848. No. X.

I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

440.—*On the Acidity and Alkalinity of the Fluids of the Human Body in the state of Health and Disease.* By M. ANDRAL.—Contrary to the received opinion, M. Andral holds, as the result of numerous experiments, that the acid or alkaline reaction of the different fluids of the body never varies. The amount of the reaction in each case may vary, according as the fluid is diluted or concentrated; but an acid fluid never becomes alkaline, nor an alkaline fluid acid, even in disease. There are many apparent exceptions to this law; but M. Andral has found, as we shall see, only one real exception, and that a partial one.

Serum of the Blood.—This fluid is invariably the most alkaline in the economy; and M. Andral has never found the intensity of this alkaline reaction vary, even in disease, in any sensible degree. [This coincides with the testimony of all other authors, except Scherer, who found the serum neutral in a case of metro-peritonitis; and Mialhe, whose assertions as to the acidity of the blood in diabetes are contradicted by the experiments of Bouchardat—see the review on this subject in September Number, p. 182.] Generally speaking, also, all those pathological fluids which are characterised by the presence of albumen, are formed by the exudation of the serum of the blood, and partake in its alkalinity. Hence pus, the fluids of blisters, and of herpes, eczema, pemphigus, &c., are alkaline; and the fluids resulting from inflammations of mucous membranes are also alkaline, whatever be the normal reaction of the corresponding mucous secretions. In all these cases the unaltered serum, or blood-plasma, exudes from the vessels, and determines the character of the reaction.

Cutaneous Secretions.—The *sweat* is invariably acid, the *sebaceous matter* always alkaline. The aggregate secretion of the skin is therefore acid or alkaline, according to the predominance of the former or the latter. The contents of *sudamina* are acid, like the sweat.

Mucous Secretions.—The normal transparent secretion of mucous membranes is decidedly acid. This normal fluid contains for the most part no microscopic globules; when, however, it is exchanged for a pathological fluid containing globules, the latter is alkaline, for the reason above stated. The fluids of coryza and bronchitis are thus generally alkaline.

The secretions of the larger glands are for the most part alkaline, excepting the *urine*, which is acid. The only real exception to the acidity of the urine is, that under the influence of peculiar articles of diet it may become temporarily alkaline, but it acquires its natural acidity as soon as these are withdrawn. Its apparent alkalinity in disease is caused by its admixture with the pathological products of the mucous membranes over which it passes. M. Andral has never observed alkaline urine apart from disease of the mucous membrane of the bladder. The *bile* and *pancreatic fluid*, the *saliva*, and the *tears*, are all invariably alkaline.

The fluids of the mouth are found to vary according as the saliva is present or not. Examined in the morning, before food is taken, they are invariably acid; but when the flow of saliva has been excited they generally become alkaline, and remain so during the day. [This circumstance explains the apparent discrepancies in the results obtained by Donné and others as to the saliva.] The *secretions of the stomach are invariably acid*, whether the mucous membrane be stimulated or not. [In this particular, M. Andral differs from previous observers, who have maintained the gastric secretion to be only acid when the true gastric juice is present.] In the duodenum the reaction is commonly alkaline, from the presence of the bile and pancreatic fluid.—*Gazette Médicale*, No. 28, 1848.

441.—*Method of distinguishing Human Blood from that of the other Mammalia.* By M. CASANTI.—M. Casanti recommends the use of phosphoric acid, of spec. grav. 1.18, which he has found to distinguish, first, the blood of mammalia from that of all other vertebrate animals; and, secondly, that of man from the rest of the mammalia. When the test is to be applied, the blood is first evaporated to dryness, and an excess of the acid added. The blood of a mammiferous animal is then seen to agglutinate into a brilliant homogeneous mass of greater or less tenacity, while no such appearance is seen in any other vertebrate animals. He finds further, that when six grains of human blood in fine powder are treated with nine of phosphoric acid, and well mixed with a glass rod, it swells up into a homogeneous, liver-coloured, tenacious mass, which is extremely coherent and plastic, yields to pressure, and shows no disposition to break into fragments. With the blood of the horse the appearances are quite different. The blood swells and softens, but, in place of uniting into a homogeneous mass, it forms several clots, which do not cohere, and are easily broken up by the rod. This character the author has found to belong to most of the common mammalia; the cat alone gives a homogeneous mass, but it possesses none of the tenacity which characterises human blood, and is easily broken up. The characteristic appearance of human blood is common to both sexes and all ages. Mensual blood, however, gives a homogeneous clot, which is easily broken up into fragments, which do not again unite. —*Gazette Méd.* Aug. 5, 1848, *from the Gazetta Toscana delle Scienze Medico Fisiche.*

442.—*Origin of the Right Subclavian Artery from the Arch of the Aorta (left side), with Absence of the Right Inferior Laryngeal Nerve.* By Dr DEMARQUAY.—The author relates two cases in which the following abnormal conditions were found. The subclavian artery passed from left to right, and after having taken its origin from the left part of the arch of the aorta, passed between the œsophagus and the vertebral column, and thus reached the space between the scaleni. The recurrent nerve was absent; the pneumogastric occupied the normal position; from its internal part were given off a great number of nervous filaments, which were distributed to the larynx, to the inferior part of the pharynx, to the trachea, and to the œsophagus. All these nervous filaments, destined to replace the inferior laryngeal nerve, passed under the common carotid artery. Further, the pneumogastric afforded to the larynx a branch so voluminous, that it might be considered a veritable recurrent nerve; and which, at the inferior part of the larynx, was in every respect disposed of in the same way as the termination of the inferior laryngeal nerve. The cardiac nerves, furnished ordinarily by the recurrent, were given off by the pneumogastric.—*Gaz. Med.*, Sept. 9, 1848, and *Prov. Jour.*, Oct. 18, 1848.

443.—*On the Movements of the Brain in connexion with Respiration and Circulation.* By M. FLOURENS.—The pulsatory movement of the exposed brain, corresponding with the arterial pulse, is well known to physiologists. Haller, however, described the brain as the seat of two distinct movements: one of the kind described, the other a movement of expansion corresponding with the expiration. M. Flourens undertook a new series of experiments to determine the existence of this latter movement. He has ascertained that it may be quite well distinguished, as Haller has described it. It appears to be caused by a reflux pressure of the venous blood in the sinuses of the dura mater.—*Gazette Médicale*, July 22, 1848.

444.—*On the Absorption of Insoluble Bodies.* By M. MIALHE.—In our review of Mialhe's *Traité de l'Art de Formuler* (July Number, p. 37), we mentioned that the experiments of Oesterlen, in which he found that charcoal, administered by the mouth to fowls and rabbits, passed into the blood, in which fluid the carbonaceous particles might be detected by the microscope, were opposed to Mialhe's doctrine, that "every substance, capable of exerting a remote action on the animal economy, is soluble, or susceptible of becoming so in the fluids of the body, * * * such substances alone being capable of absorption."—(See also *Journal* for May 1847, p. 448.) M. Mialhe has since repeated the experiments of Professor Oesterlen, and asserts that charcoal, when thus administered, does not pass into the circulation.—*Gaz. Méd. de Paris*, August 19.

[We are disposed to think that Oesterlen may have been deceived in his observations; but we confess that we should like to see the experiments repeated by a less biassed observer than M. Mialhe. The question is important, and we hope that the committee of the Academy of Medicine, to which it has been referred, will give it a satisfactory examination. We shall take care to communicate the result to our readers.]

II.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

445.—*On the Healthy and Diseased Structure of Articular Cartilage.* By JOHN BIRKETT, F.L.S., F.R.C.S.—From the constant influence of attrition upon the articular cartilage, it is evident that it would be rapidly destroyed if it were not endowed with a high capacity of nutrition and reproduction. The increase of cartilage, both in thickness and superficial extent, with the growth of the body, also furnishes evidence of the existence of this power, which Mr Birkett believes to reside in the nucleated cells enclosed in its blastema. The author assents to the observations of most physiologists, in believing cartilage to be a strictly non-vascular tissue, and he is at some pains to point out its analogies with the epithelial structures, such as epidermis or horn. He considers articular cartilage to hold precisely the same relation to bone as the epidermis to the corion; the analogue of the latter being found in the very hard and peculiar layer of bone which lies immediately beneath the cartilage, between it and the cancelli. He observes, also, that the cancelli may be regarded as representing the subcutaneous cellular layer, having, like it, areolar spaces, which are occupied by a fatty substance, the marrow. The arrangement of the capillary vessels in the articulating ends of bones is in terminal loops, which pass into projections of the osseous tissue immediately in contact with the hard articular layer alluded to, and which the author regards as analogous to the papillæ of the corion.

The structure of this thin layer which intervenes between the vessels and the cartilage, differs from that of true bone; it is harder and denser; the lacunæ are very regularly disposed, but the canaliculi which characterize the ordinary osseous tissue are absent. Its articular surface is irregular, and is closely fitted by corresponding irregularities of the cartilage. The other surface is equally closely adapted to the papillæ of the osseous tissue, inclosing the looped capillaries, as before stated.

The articular cartilage presents a variation in structure towards the free surface. The cells which, throughout two-thirds of its substance, have no definite arrangement, become flattened out, their long axis assuming the direction of the articular surface. This the author regards as a modification similar to that of epithelium, the flattening of the cells being the effect of the pressure to which they are subjected. It is this flattened layer of cells which has been regarded by writers as a prolongation of the capsular epithelium upon the cartilaginous surface.

The destruction of cartilage in disease commonly proceeds by an infiltration of fatty granules, first into the cells, and ultimately into the hyaline intercellular substance. Thus disorganized and softened, the cartilage is removed by a gradual process of attrition, which the author considers as different from ulceration. [We do not see any good grounds for this distinction. The attrition, ulceration, or molecular disintegration of articular cartilage has been carefully described and figured by Goodsir, (Anat. and Path. Observations, p. 17, and Pl. I. Fig. 13.)]

Along with the process of destruction proceeds the formation of a tissue, containing newly formed fibres and blood-vessels, which arises whenever the cartilage is removed. These vessels are connected with, and spring from, those of the fibrous tissues adjoining the joint; they are also frequently connected with those of the subjacent bone; but, in order that this may be the case, it is necessary that the thin articular lamina of bone, as well as the cartilage, shall have been removed by attrition. It is only, therefore, when this layer has been entirely removed that complete *synostosis*, or vascular and organic union of the opposite ends of the bone, can take place through the medium of the newly-formed fibrous tissue and its vessels; and it is commonly observed that up to a late period in the process of anchylosis, portions of the articular layer remain, and prevent the bony union at the joints where they are present.—*Guy's Hospital Reports*, Oct. 1848, p. 36.

[We gladly accept this contribution to a subject very much neglected in pathology, and hope that Mr Birkett will sedulously continue the observations he has so well begun.]

446.—*On Cysts of the Testis, Epididymis, and Appendix of the Testis.* By M. GOSSELIN.—The author draws a broad line of distinction between the larger and the smaller cysts of the testicle and epididymis. The latter he considers as independent structures, while the former are formed at the expense of the normal structures, by partial obliteration of the tubes. The small cysts, according to M. Gosselin, are never found before the period of puberty, and are rare and small till after forty; but in advanced age they are exceedingly common, occurring in two-thirds of the testicles examined, whe-

ther healthy or diseased in other respects. They vary from the size of a millet-seed to that of a pea. They occur on the testicle between the tunica vaginalis and albuginea, sometimes sessile, and occasionally with a pedicle, and never contain seminal animalcules. The large cysts, on the contrary, which have been described by Brodie and Curling, constantly contain spermatozoa, even when the vesiculæ seminales and proper apparatus of the testicle have ceased to contain semen. These large cysts are frequently mistaken for hydrocele; and the author believes that all the cases of this disease, in which spermatozoa have been found in the fluid evacuated, have been either cysts of the kind alluded to, or ordinary hydroceles communicating with a cyst. M. Gosselin believes these cysts to be formed originally by the rupture of obstructed seminiferous tubes, and thinks that their communication with the proper secreting structure is early sealed up by contraction and obliteration of the normal canals.

M. Gosselin explains the production of the smaller cysts of the testicle, and likewise of many ovarian cysts, by supposing that these organs, at the period when their natural function ceases, exhibit the remains of the functional *nisus* in forming new structures. [We cannot say that this fanciful explanation appears to us at all satisfactory. If there still exist any any functional activity, what obstacle is there to its exercise in the production of the normal secretion? We have been accustomed, on the contrary, to consider the absence of the *nisus* as the cause of the cessation of the normal secretion.]

The appendix of the testicle is a small fibro-cellular mass (sometimes containing fat), seldom exceeding the size of a pea, which is attached to the tunica vaginalis, just below the head of the epididymis. This organ has been seldom described by anatomists. It is occasionally the seat of cysts, and has then been described by pathological anatomists as an adventitious structure.—*Archives Générales de Médicine*, 1848, pp. 24, 42, and 163, 181; and *British and Foreign Med. Chir. Review*, Oct. 1848.

447.—*Influence of Physical Agents on Variola.* By M. Serres.—M. Serres inquires, why the skin is the seat of election of the variolous pustule, while the mucous membranes are comparatively seldom affected? This he considers to be owing to the influence of the air on the development of the pustules, which are most largely developed on the face and hands, where there is the greatest exposure; and most scanty on the hairy scalp, the axilla, and about the genitals, where the parts are protected from the contact of the atmosphere either by the presence of hairs or by position. The influence of the air upon the production of the variolous pustules is further shown, by the circumstance, that when the mucous membranes are attacked, it is invariably those which are exposed to the contact of the air. Thus, in fifty cases in which the pharynx, epiglottis, and larynx were attacked by the pustules, he has uniformly found that these stopped short at the glottis, the œsophagus remaining quite sound. In the majority of instances, likewise, the conjunctiva, vagina, and rectum, are exempt from the affection, being in the normal state secluded from the contact of the atmosphere; but if these membranes are everted, as in trichiasis, and in prolapsus of the uterus and rectum, they are readily attacked by the pustules.

M. Serres considers, that these views as to the development of the pustules of variola are borne out by experiments. Thus he finds, that, by covering the pustules with little cups of darkened glass, or enveloping them in honey, or in a layer of fatty matter, their progress is arrested; a result which he ascribes solely to the exclusion of the air.

The condition of the atmosphere (as might be expected from the above remarks) exercises a most important influence over the severity of small-pox. From an extended consideration of the epidemics of different countries, it is found that the disease reaches its maximum of intensity in a dry atmosphere; and that the dry heat of the south and dry cold of the north are equally unfavourable in relation to variola. This is particularly shown in the epidemics of Holland; and it was this circumstance which Sydenham had in view, when he said that a moderate temperature was especially favourable in variola.

In the Hospital of La Pitié, during the years 1817, 1818, and 1819, the variolous patients were treated in ill-ventilated, dark, and moist wards; there were few confluent cases. However, conceiving that these wards were insalubrious, M. Serres had the patients removed to wards in the fourth story, very dry, exposed to the south and north, warm in summer and very cold in winter. The result was unfavourable; the eruptions became more grave, and the mortality increased. Under these circumstances, the patients were again removed to the ground floor. Thus was illustrated, on the small scale, the same truth as springs from a considera-

tion of the extended epidemics before mentioned.

If it be thus proved that moisture exerts an influence on the development and intensity of variola, it is not unlikely, according to M. Serres, that the same cause tends to impede the development and efficacy of the vaccine pustule. It remains to be decided by statistics whether the vaccine virus is less active and less preservative in its influence in the moist climates of the south of Europe, than in the drier ones of the north.—*Memoir read to the Institute*, 25th September 1848; *Union Médicale*, 5th October 1848.

448.—*On Diseases of the Heart in Birds.* By M. Rayer.—M. Rayer, in a note recently read at the Académie des Sciences, states that he has long made the diseases of birds a subject of careful investigation; and in reference to what he has observed as regards disease of the heart, he is induced to ask this question: "Is there among birds, mammalia, and especially man, any relation between the activity of the generative function and the production of disease of the heart?" It is founded upon the facts.—1. That all the birds in which he has observed disease of the heart are of the male sex, although of every species he has examined a far greater number of females than males.—2. All these birds manifest uncommon generative ardour; such are the common cock, the cock pheasant, the domestic pigeon, and the musk duck.—*Gazette Médicale*, No. 25; and *Brit. and For. Med. Chir. Review*, Oct. 1848.

[The premises are fallacious; for it cannot be justly held that physiological peculiarities in the mode of accomplishment of the generative function imply greater "generative ardour" in one species than in another. According to this standard, the male of the frog presents a much more marked instance of generative ardour than any of the birds named. On the other hand, if mere amount of production be a test (and we should think it not a bad one) of "the activity of the generative function," then the *females* of fishes far excel in this respect any other animals possessing hearts. M. Rayer should have extended his inquiry to these. The idea that generative ardour, or activity of the generative function, is confined to the male sex, is likewise quite absurd. It is pity that any one so justly honoured in science as M. Rayer, should allow himself to be led into so loose a method of reasoning.

The conclusions which appear to spring from M. Rayer's inquiries, in so far as the data are published, are, that diseases of the heart in birds occur chiefly, 1st, in males; 2d, in domesticated and naturalised species. We are not aware, however, whether the number of instances be such as legitimately to establish these or any other results.]

449.—*On Photuria, or Luminous Urine.* By M. Fallot.—Cases, however rare, have been cited, in which the urine, as it passed from the urethra, had a luminous appearance. The phenomenon has not been explained.

A man, aged sixty, had for many years, at intervals, passed luminous urine; the luminous appearance was most distinct as the fluid dashed on the ground, but a few sparks were seen in the stream as it passed from the urethra. Examination discovered nothing particular in the fluid, which varied in its constituents according to circumstances.

M. Fallot thinks that these cases would be found to be more common if attention were directed to them, but that, as the affection is not accompanied by any notable derangement of health, it passes unobserved. In the case referred to, the patient had never alluded to the circumstance until he was questioned concerning it, in consequence of its being accidentally witnessed by M. Fallot.—*Rev. Med. Chirur., and Prov. Med. Journ.*, Oct. 4, 1848.

450.—*On a New Substance occurring in the Urine of a Patient with Mollities Ossium.* By Dr Bence Jones.—The urine in this case spontaneously solidified on cooling, but was reliquified by heat. The substance to which this property was due constituted as much as 67 parts per 1000 of urine. It was quite insoluble in alcohol, and was completely precipitated from the urine by the addition of that reagent. It slowly but entirely dissolved when thrown into cold water; but was much more readily dissolved by boiling water. After boiling for some little time, a gelatinous coagulation took place. The aqueous solution gave an immediate precipitate with nitric acid, which entirely and readily dissolved when heated. Boiling caused no precipitation; but on cooling the precipitate was again formed. Strong hydrochloric acid dissolved the substance, giving a splendid purple blue solution. It was soluble in caustic potass at 140°, or, after long standing, at the ordinary temperature. From this solution it might be precipitated by excess of acetic acid; but the precipitate was redissolved, as before, by heat. When the

alkaline solution was boiled, a deep inky blackness was produced by dropping acetate of lead into the solution. If the watery solution was acidulated with acetic acid, an immediate white precipitate fell on the addition of ferro-prussiate of potass.

These reactions announce the substance in question as completely *sui generis*. From ultimate analysis, its composition per cent is found to be C 52·10, H 6·70, N 15·17, O 26, with 1·03 per cent. of sulphur, and ·19 of phosphorus. The presence of the two latter ingredients proves that it is not an oxide of protein, notwithstanding its resemblance in behaviour with several reagents to Mulder's hydrated tritoxide of protein. Its reaction with nitric acid hinders all possibility of confounding it with albumen, which may be separated from it by adding nitric acid boiling, and filtering whilst hot. It is regarded by Dr Bence Jones as a hydrated deutoxide of albumen.

In the case in question there was as much of this peculiar albuminous substance in the urine as there is of ordinary albumen in healthy blood: so that as far as the albuminous constituent alone is concerned, the secretion of each ounce of urine was equivalent to the loss of an ounce of blood. The patient, as might be expected, rapidly sank; and on post-mortem examination it was found that the bony structure of the ribs might be cut with the greatest ease. The condition of the bones has been minutely described by Mr Dalrymple (*Dublin Journal*, August 1846.)

Dr Bence Jones remarks that this substance should again be looked for in acute cases of mollities ossium. The reddening of the urine on the addition of nitric acid might perhaps lead to the re-discovery of it. When found, the presence of chlorine in the urine, of which there was a suspicion in the above case, should be a special subject of investigation, as it may lead not only to the explanation of the formation of this substance, but to the comprehension of the nature of the disease which affects the bones.—*Philos. Transactions*, Part I., 1848; and *Brit. and For. Med. Chir. Review*, Oct. 1848.

451.—*On the Acid or Alkaline Reaction of some of the Fluids in Cholera.* By M. Burguieres, sanitary officer at Smyrna.—The principal variations from the law laid down by M. Andral (see *Retrospect*, No. 440), were in relation to the cutaneous secretion and the discharges from the stomach. In the stage of collapse, the perspiration is clammy and viscous; in this state it loses its acid reaction, and becomes neutral. In the period of reaction it again becomes acid; this is in general a good sign. The first matters vomited were generally acid; after the patient vomited three or four times, and the evacuations had assumed the real choleric character, the reaction became alkaline. After death, it was found that the secretions of the whole intestinal canal, from the stomach downward, are distinctly alkaline.—*Union Médicale*, 5th October 1848.

III.—PRACTICE OF PHYSIC.

452.—*On the Epidemic Fever of* 1847-8. By Robert Paterson, M.D., F.R.C.P.E. —The author gives, in this communication, an elaborate account of the Edinburgh epidemic, as it appeared in the extra fever wards of the Royal Infirmary of Edinburgh. We shall endeavour shortly to analyse the principal facts and conclusions embodied in this memoir.

Character of the Epidemic.—Three types were observed by Dr Paterson:—the *short* or *relapsing fever*, which was in the largest proportion; *typhus*, next in order; and *synochus* or *continued fever*, which was in the smallest. The first of these was distinguished by its distinct crisis from the fifth to the seventh day, and the equally distinct relapse occurring from the fourteenth to the eighteenth, sometimes succeeded by a second or even a third relapse. This, from the regularity of the intermission, and relapse at the interval of a week, is considered by the author to constitute a new link in Cullen's division, approaching the intermittent on the one hand, and the synocha on the other. The synochus and typhus, while they are mentioned by Dr Paterson as distinct fevers, are not described by him at length; nor are any characters given upon which the distinction has been founded.

History.—It appears that a fever of small fatality, terminating in a critical sweat in the first week, and generally relapsing, is recorded as having occurred in Ireland in 1731, and also in 1741. The fevers of 1800–1, and 1817–18, had, according to Drs Barker and Cheyne, the same character. The fever of 1826–7, in Ireland (Report of the Fever Hospital of Dublin, by Dr O'Brien), presented two types—the old constitution, or ordinary

typhus, and the new constitution, which corresponded in character with the relapsing fever. [According to Dr Christison, a large proportion of the fever cases in Edinburgh in 1819, presented the same character.]

Typhus and synochus appear to be endemic in Britain, at least since the beginning of the present century. An importation of fever by prisoners of war, in 1779, is recorded by Dr Hamilton in his work on purgative medicines. In 1781, an importation occurred from Jamaica. From returns made by Dr Orr of Glasgow, it appears that fever occurs in an epidemic form in that city with considerable regularity once in ten years; and Dr Paterson asserts the same law to prevail in Edinburgh, and also in Ireland.

The present epidemic commenced in Edinburgh in March 1847. It was preceded by a winter of great scarcity, the effects of which were peculiarly severe in Ireland and the poorer parts of Scotland, owing to the failure of the potato crop in 1846. In Edinburgh, however, the wages of the working classes being high, the pressure of this scarcity was not so severely felt. An endemic scurvy had prevailed very extensively during the winter, but fever had not been unusually prevalent.

Almost every case admitted into the Edinburgh Infirmary at the beginning of the epidemic was from Ireland; and for three months they continued so. On the 10th of June there were 473 cases of fever in the house, of which 7 were English, 87 Scotch, and 379 Irish. On the 26th of July there were 608 in all, being 10 English, 186 Scotch, 410 Irish, and 2 foreigners. In Glasgow the Irish amounted to 60 per cent. of the whole epidemic; in Edinburgh to 73 per cent.

The extensive prevalence of fever in Ireland at this period, and the large immigration of Irish families into this country, owing to the abundance of employment here, and the scarcity of food or employment in their own country, lead irresistibly, in connexion with the above circumstances, to the conclusion, that the fever of 1847–8 was imported chiefly from Ireland. This conclusion is borne out by the circumstance, that Liverpool and Glasgow, the ports most accessible from Ireland, were attacked by epidemic fever a considerable time before Edinburgh, or any other populous cities.

Dr Paterson adduces numerous instances, tending to prove the connexion of fever and famine in Ireland. This subject has been often discussed.

The number of cases in the Infirmary increased regularly from March 1, 1847, when there were 73, up to July 12, when they attained the maximum of 628; they then began to decline with equal regularity. On January 1, 1848, there were in the house 444; on April 1, 333; on August 12, 116. In addition to these, a very large number were treated in special hospitals, and at their own homes. The total number of fever cases, and the total mortality, cannot be accurately stated; nevertheless it seems not improbable, from Dr Paterson's calculations, that nearly 20,000 cases occurred in Edinburgh, with a gross mortality of 2500.

Statistics of Mortality.—The extra accommodation provided in the Royal Infirmary consisted, as is well known to our Edinburgh readers, of two extra hospitals, four sheds, and five tents, which were placed in the open space behind the main building. Dr Paterson finds that the mortality was least in the tents, greater in the sheds, and greatest in the permanent buildings. The number of patients treated in the tents (which were only used in summer) was 312; the total mortality 17; being 5·36 per cent. The mortality in the three sheds, of which records were kept, was respectively 13·78, 9·95, and 9·33 per cent. The general register of the hospital, on the other hand, gives, from October 1846 to October 1847, a mortality in fever of 15·42 per cent. for males, and 10·03 for females. Dr Paterson argues that the small amount of mortality in the tents was owing to the free ventilation, and that the superiority of the sheds to the permanent buildings in this respect is to be attributed to the same cause.

Contagion.—The contagious nature of all the forms of fever in this epidemic, was proved by the records of cases of fever which occurred among the attendants.

Of nine physicians acting in the fever wards, three were seized with fever, two having typhus, the other relapsing fever. One died. [All those who were exempted had passed through fever in a former epidemic.]

Of twenty-two clerks successively occupied in some way or other with the fever wards, twelve had fever; eleven had typhus, one relapsing fever, and one [two] of the twelve had both typhus and relapsing fever. Of the twelve, three died. [Of seven clerks who remained exempt, three had passed through fever in former epidemics.]

Of the nurses and others whose duty it was to come near the fever wards, it may be affirmed that none escaped taking one or other form of the disease who had not

had it previously, while some had both the prevalent forms of it, viz. typhus and relapsing fever.

Eruptions and Complications. — The measly eruption was present in nearly every case of typhus. No prognostic character could be drawn from its early appearance, or from its dulness or vividness, as to the future severity of the disease. Its livid colour always marked a bad form of disease. It was occasionally seen also in the relapsing fever, but only in the first attack. The true petechine or ecchymoses were very common.

The complications were very varied. During the hot weather of June, the number of cases admitted with head affection was remarked, while the changeable temperature and damp weather of the latter end of July and August, brought an accession of cases with chest affections. Dothinenteritis prevailed to a considerable extent during the spring and summer months, after which the intestinal lesions became less common, until the autumn months ushered in a much more extensive series of cases of dysentery. This continued during the autumn and early winter months, passing away towards the spring of 1848.

Treatment.—Few of the typhus cases could bear general depletion, even for serious inflammatory complications. Stevens' saline powders were used as the common fever medicine, with the effect of brightening the eruption, and making less wine necessary. Wine was requisite in most cases at an early period; and sometimes carbonate of ammonia, camphor, whisky or brandy, were requisite as stimulants.

In the relapsing fever, blood-letting for complications was well borne. No advantage was observed to accrue from diaphoretics. Various methods were tried to avert the relapse; but confinement to bed, regulated diet, quinine, bebeerine, and arsenic, produced no effect.—*Edinburgh Med. and Surg. Journal,* October 1848.

[We have devoted a large space to the analysis of this memoir, because of the importance of many of its facts and deductions, and because it is the only extended history which has yet appeared of the recent Edinburgh epidemic. But we cannot conclude without entering our protest against some of the author's conclusions. It does not appear to us that he has even hinted at an argument for the separation of the synochus from the typhus, a distinction opposed, we believe, to the matured experience of the majority of medical men who have witnessed recent epidemics of fever in Edinburgh. Nor can we admit the analogy of the relapsing fever or synocha with the intermittents, especially when we consider the failure of all anti-periodic medicines in averting the relapse. The congestion of the spleen and liver, which he speaks of as common to this fever with intermittents, was also a most marked character of typhus.

But our chief objection to the conclusions of the author applies to the deductions which he makes from the smallness of the mortality in the tents. We are satisfied that this was owing, not to any peculiarly favourable conditions for cure in these temporary structures, but simply to the fact, that the cases sent to the tents *never approached in severity* those distributed to the permanent wards. Although this is contrary to the experience of the author, who was "not connected with the admission of patients," we have the authority of every officer of the house who *was* habitually employed in the waiting-room, for stating, that the uniform principle was to distribute the cases in proportion to their severity; first, to the houses, then to the sheds, and, lastly, to the tents. That this was the case in reference to the two last, Dr Paterson's own statistics show; thus in the sheds the proportion of relapsing fever to the whole number of cases is 1 to 2·65, or somewhat less than two-fifths, thus leaving *three-fifths* for the severer forms; while in the tents the proportion is 1 to 1·79, or about five-ninths, which gives only *four-ninths* of the whole for typhus, including continued fever. This is enough to show the principle of the distribution; and we have no doubt that the same calculation, applied to the statistics of the wards in the houses, would lead to a much more marked result.]

453.—*The present Epidemic of Cholera in Russia.* (By a medical correspondent of the *Union Médicale*).—The writer states that no cases were observed to be distinctly referrible to contagion. During the prevalence of the epidemic, the choleric influence appeared to be universally felt. All other diseases assumed more or less of the character of cholera, excepting other epidemic diseases, which appeared to be antagonistic to it. Even individuals unaffected by disease experienced some species of uneasiness; fatigue, prostration, epigastric oppression, accompanied by frequent gurgling in the intestines, were exceedingly common. Cattle were often unable for work, and lost appetite. The vegetable kingdom also was observed

to be less vigorous during the prevalence of the epidemic.

The prophylaxis, during the prevalence of cholera, is of the utmost consequence. A strict regimen should be universally followed, and all substances difficult of digestion, especially fats, raw fruits, green vegetables, and salt meat. During the actual attack, cold water is the only drink which satisfies the patient, or alleviates the constant thirst. The remedies most in favour with the people are—olive oil administered by the mouth in spoonfuls, mingled either with red wine or brandy; white of eggs in an infusion of mint; marine salt, half-an-ounce to a bottle of water; and warm milk, which appears to allay the vomiting. The author, in common with many other Russian practitioners, places considerable reliance on calomel, in doses of three to five grs. every half-hour till there is amendment, in combination either with ipecachuan or opium, and sometimes with an anthelmintic. In the last stage, muriate of ammonia, sulphate of quinine, and, when typhoid symptoms are present, muriatic acid, were used with advantage. The author also gives ice internally with good effect.—*Union Médicale*, 5th October 1848.

454.—*Treatment of Porrigo favosa.* By Dr Neligan.—Porrigo capitis is the most obstinate of the eruptive diseases of the scalp, and cases of it are recorded as having resisted the most varied treatment for years. Dr Neligan's experience, however, enables him to state, that though an obstinate disease, it may be cured in a much shorter space of time than is generally believed.

His treatment is both constitutional and local. Milk diet is strictly insisted upon. The constitutional remedy he uses, is the iodide of arsenic, a powerful alterative, and an active remedy, but one which may be given with the greatest safety to the youngest child, its effects being, of course, duly watched. The dose of this preparation is, for an adult, from one-tenth to one-fourth of a grain, very gradually increased; for a child six years old, one-fifteenth of a grain; and for a younger child, from one-eighteenth to one-twentieth of a grain. It is best given to adults in the form of a pill, made with dry manna, and a little mucilage; to a child it is best administered in the form of powder, its minute division being perfected by means of a little white sugar or aromatic powder. When the system is saturated with this medicine, it is usually found that some constitutional symptoms, such as acute headach, dryness of the throat, &c., are manifested; but in some cases Dr N. has given it in full doses for many weeks without any manifestation of its effects, further than those produced on the disease for which it was administered. When, however, it gives rise to the symptoms above mentioned, its use should be intermitted for some days, and an active purgative administered.

The local treatment for the first two or three days is the same as that directed for the other diseases of the scalp.—(*See Monthly Retrospect*, p. 191.) The carbonate of potash ointment is at the expiration of this time replaced by one containing the iodide of lead, in the proportion of half a drachm of the iodide to an ounce of prepared lard; the head is to be still washed every morning with the carbonate of potash lotion. The strength of this ointment should be increased after a fortnight; if the disease again appear, even to double that indicated. The ointment is spread on lint, and over it a closely-fitting oil-silk cap is placed. Several cases are recorded in which cures were effected by these remedies in from three weeks to several months.

"The rational principles," Dr Neligan observes, "on which I think this plan of treating porrigo capitis proves successful, and which first led me to its adoption, are:—That it is a vegetable production, which grows and is reproduced on the cuticular surface of individuals whose system is in a peculiar cachectic state, and, consequently, that it is a constitutional affection. The object, then, is, to destroy the vitality of the fungus, and, by altering the nature of the soil on which it flourishes, to prevent its reproduction. It is with the first view that I use the iodide of lead as a local application, and to fulfil the second indication that I administer internally the iodide of arsenic."—*Dublin Journal*, August 1848.

455.—*Clinical Lecture on Lupus.* By M. Devergie.—During a course of clinical instruction on diseases of the skin at the hospital Saint Louis, the author has devoted three lectures to the consideration of this affection. Lupus, he observes, is a disease known from antiquity—it was denominated by the Greek authors *Herpes esthiomenos*; by the Latin, *Herpes exedens*. Willan and Bateman have revived the old expression *Lupus*, to which M. Devergie adheres, solely because it is the term most generally employed in works. The author defines Lupus a disease originating in a

certain part of the body, accompanied by a chronic swelling, a sombre red colour, and a thickening of the skin and subjacent cellular tissue; this thickening being sometimes so considerable as to double or even treble the normal bulk of the skin. According to the stage of the disease is the augmented local heat and the pain which follows; the external appearance of the skin is changed—sometimes it is found smooth, at other times rugous. But these characters are peculiar to the different varieties of Lupus; it is the same with the ulceration, which is developed more slowly. All these characters are of great importance, but must nevertheless be considered as only secondary to the fundamental one, which is the chronic swelling. This swelling also exists at the bottom of the ulceration. Instead of the ordinary division of Lupus into the Lupus exedens, or Lupus with ulceration, and the Lupus non-exedens, or Lupus without ulceration, the author suggests, as a more practical subdivision, the following:—1st, Tubercles with or without ulceration, Lupus exedens, Lupus non-exedens; 2d, Tubercles arranged in the form of raised circles (*bourrelet circulaire*), Lupus herpetiforme. In the Lupus exedens, or non-exedens, there exists a greater or less portion of diseased skin, and this is covered by a larger or smaller number of tubercles. The only difference exists in the ulceration, which does or does not succeed the formation of the tubercles. In the Lupus herpetiforme there exists a raised circle—it is the distinguishing mark of this affection, it is also its means of propagation: the disease makes progress by the extension of this circle. Lupus non-exedens presents a tubercular and a serpentine (*serpigineuse*) form. Lupus exedens offers four varieties:—1st, Tubercular; 2d, Serpentine, or herpetiform; 3d, Lupus exedens, boring or perforating; 4th, Lupus vorax, devouring, so named from the rapidity of its progress—it is very rare.

All parts of the chest are liable to become affected with Lupus; but as a general rule its seat is the face, and thence the nose is the part most frequently attacked. More rarely the disease commences in one of the cheeks, then passes to the other, and continues advancing till the whole face is covered as with a mask: this degree of deformity results from the Lupus serpiginosus—this variety of the disease is consequently more to be dreaded than the tubercular. The author has observed the tubercular form most common on the trunk, and the serpentine form on the extremities; and mentions the case of a man whose penis was affected with the latter variety, as increasing the importance of a knowledge of this fact, an error in diagnosis having been nearly committed in the case related.

The commencement of Lupus is generally attended by a slight lenticular swelling of the skin; the tendency of this swelling is to increase, and to extend itself at the same time to both superficial and deep parts. The author conceives that Lupus never manifests itself for the first time in adult or old age. The disease he believes capable of curing itself, but for this purpose from twenty-seven to thirty years are required. The cause of Lupus he supposes to exist in the peculiar temperament or constitution of the person affected, and the one most prone to it is the lymphatic.

Nothing is more remarkable in the progress of Lupus than the extreme reduction of the affected parts at the termination of the disease, as compared with their augmentation in its commencement. In this respect the nose suffers most. The same tendency to reduction is not equally conspicuous in all the varieties of lupus. That form already noticed under the name of Lupus vorax is always accompanied with much destruction, and consequently when the disease is arrested ugly cicatrices result. On the other hand, the Lupus herpétiformis, though affecting a large surface, does not invade deeper parts; it is therefore rarely followed by much deformity. In the words of M. Devergie, the general health of the patients affected with Lupus is good, and but few die in the hospital.

In the *diagnosis* of Lupus, it is of importance to remember that other diseases occurring in the same parts present nearly similar characters. The Impetigo rodens, when attacking the nose, in its progress closely resembles Lupus: one distinguishing feature of the latter, however, is absent in the former—the increase in volume and thickness of the parts affected. The syphilitic eruptions are those which the author has apparently found most liable to be mistaken for Lupus. In distinguishing doubtful cases, he seems to have attached most importance to the following particulars:—1st, The constitution of the person affected: as already stated, Lupus is generally found connected with the lymphatic habit. 2d, The age of the individual: the author believes that Lupus never commences in adolescence or old age. And 3d, The results observable from treatment. Cases are related in which anti-syphilitic remedies were employed, under the impression that the

eruption was of syphilitic origin, and, having failed, the ordinary treatment adopted by the author in Lupus has proved successful.

In the treatment of Lupus, M. Devergie speaks of internal remedies and external applications—under the former head, of iodine, the preparations of iron, and the cod liver oil. Iodine he has employed both internally and externally, both alone and combined; he considers it as indirect in its action, predisposing to a cure, but not directly effecting one. The preparations of iron he has found useful, more especially in females affected with Lupus, and at the same time with irregular or suppressed menstruation. The remedy which the author places most reliance on, and which in his hands has proved by far the most successful, is the cod liver oil; its efficacy, as compared with other internal remedies, he has established by incontestable proof. There are two varieties of this oil—the white and the brown; the latter is more disagreeable, possessing the fishy odour better pronounced, but it is the more active, and the one which the author has employed. The dose he administers is large—twelve or fourteen tablespoonfuls, morning and evening. In the majority of cases this remedy alone has been trusted to; sometimes the use of the sulphur bath has been at the same time prescribed; or, in cases with irregular menstruation, the preparations of iron, as formerly noticed. A tolerance of the oil has always been easily established; peppermint water, rum, and brandy, were the menstrua occasionally employed for its exhibition.

The external applications which the author has seen benefit result from are, the rubefacient and caustic iodine and *la pâte de cancoing* (chloride of zinc with flour), and *la pâte de Vienne*. The oil of juniper-wood (huile de cade), which was recommended by M. Serre, he has employed occasionally as an external application with success. In Lupus of long continuance, the author disapproves of the employment of antiphlogistic treatment; but when the disease is at its commencement, the use of such means may sometimes prove beneficial.—*Gazette des Hôpitaux*, 30th September 1848.

[Nevertheless, even in protracted cases we have seen the employment of repeated leeching and scarification, and also blisters, followed by the most beneficial results. The author makes no mention of arsenic; which is, however, a remedy of unquestionable power even in Lupus.]

456.—*Hysterical Attacks and Hallucinations from Strychnia.*—A girl, aged seventeen, having become partially paraplegic after a long illness, was treated by M. Vigla in the Hotel Dieu with strychnia, which she took to the extent of three centigrammes (nearly half a grain) without any more than ordinary effects. On changing the preparation, however, one centigramme (1-6th of a grain), twice a-day, sufficed to produce violent tetanic spasms, with great congestion of the face and hallucinations. At first the symptoms had a distinctly hysterical character, but this afterwards disappeared. The paraplegic symptoms became decidedly ameliorated. —*Gazette des Hôpitaux*, Oct. 7, 1848.

457.—*On a Diseased Condition of the Arch of the Aorta, which is liable to be mistaken for Valvular Disease.* By Dr O'Bryen Bellingham, Dublin.—This morbid condition, according to Dr Bellingham, consists essentially of a loss of tone and elasticity in the arterial coats, in consequence of which the vessel cannot increase or diminish in diameter with the increased or diminished amount of blood which it receives, but remains constantly of the same calibre; at the same time that it loses the smoothness and polish which its internal coat presents in the normal condition, and the interior of the artery becomes rough and uneven, the general dimensions of the vessel being usually somewhat increased.

The aorta, in its healthy state, possesses in a high degree the property of elasticity, due not only to its proper fibrous coat, but also to the subserous or sclerous coat. In virtue of this property, its calibre is accommodated to the amount of blood it contains, and thus it is always filled; with the loss of its elasticity, still co-exists the necessity for its being filled, and when the cardiac wave has passed on, regurgitation takes place from the distal vessels to supply what otherwise must be a vacuum, owing to the inability of the aorta to accommodate itself to the diminished quantity of blood. When the elasticity of the arch of the aorta is impaired, owing to the presence of abnormal deposit, and its calibre increased (though this is not a necessary condition), the patient presents several phenomena hitherto considered pathognomonic of the permanent patency of the semilunar valves, and a morbid condition conducive to that more formidable lesion.

The peculiar jerking pulse, the visible and locomotive pulsation of the carotids, radials, &c., depend on the same cause as when the aortic valves allow regurgitation, the regurgitation, however, in the

case under consideration, taking place into the aorta itself. From the rough and uneven condition of the internal coat, increased friction takes place between it and the particles of the blood transmitted by the left ventricle, and a murmur is developed synchronous with the ventricular systole; while the regurgitation of the blood, and its passage over a similar rough surface, during the ventricular diastole, will occasion a murmur synchronous with the second sound of the heart, both sounds bearing a proportion to the condition of the vessel. The character of the second murmur, however, is usually short, rough, and harsh; it is scarcely, if at all audible below the base of the heart. In simple patency of the semilunar valves, the murmur is single (?), synchronous with the second cardiac sound, and distinctly audible from base to apex of heart. In the more complicated case of permanent patency, where, from spicula or vegetation on the valves, or other causes, a murmur accompanies the first cardiac sound, the diagnosis would be more difficult, but might still be attempted from the possibility of hearing the second murmur towards the apex of the heart in case of patency.

The diseased condition of the aorta under consideration is usually followed by dilatation of the arch, which Dr Bellingham is inclined to attribute, not to "the existence of any impediment to the circulation through the vessel or its terminal branches," nor to "dilated or hypertrophied heart," nor to "the shock of the blood transmitted by the left ventricle," but to the regurgitation of the blood from the carotid and subclavian arteries, this last cause being perfectly adequate to the secondary production of patency of the aortic valves; a condition certainly not referrible to any of the other causes enumerated. Thus, as the result of the long continuance of this diseased condition of the aorta, the semilunar valves, which, at each time of their closure, are subjected to the shock of a column of regurgitating blood, at length yield in their weakest point, and allow regurgitation into the ventricle; while part of the force of the regurgitating blood being expended on that part of the artery nearest to the valves, it ultimately yields to such a degree laterally, that the valves cannot meet. In this combination of valvular and true *aortic* disease, the phenomena of the former predominate; the existence of the latter is to be judged from former observation, and the sequence of the phenomena.

From the principles here laid down, Dr Bellingham proposes to explain certain phenomena of thoracic and abdominal aneurism. Of the double sound heard in thoracic aneurisms, he attributes the second (so often confounded with the second sound of the heart, but which though audible over the aneurism, is often inaudible between this point and the heart), to the regurgitation into the aneurismal sac, owing to a condition of parts similar to the inelastic and rigid aorta above described; the second impulse of thoracic aneurisms, a phenomenon of no less importance, and not so often made the subject of observation, he attributes to the same cause. The absence of the second impulse and second sound in aneurisms of the abdominal aorta, and the vessels of the extremities, he explains on the principle that the blood cannot regurgitate against gravity.—*Dublin Med. Press*, April 21, 1847.

[The opinions of so experienced a stethoscopist as Dr Bellingham are worthy of all consideration, and we have therefore called the attention of our readers to his views, although we are convinced that in some respects they are erroneous. We have never observed any facts corroborative of the idea, that mere disease of the arch of the aorta could produce the murmur of regurgitation of valvular disease; and we find it difficult to conceive how the transmission of the wave from the heart, should have the effect of producing "a diminished quantity of blood" in the arch, and a consequent necessity for a supply by regurgitation. Moreover, the rigid aorta invariably produces a pulse differing from the pulse of diseased aortic valves; the latter being soft and large, while the former is hard and somewhat wiry. Another diagnostic sign, which we believe scarcely ever fails, but is not mentioned by Dr Bellingham, is, that in rigidity of the arteries, when the valves are sound, the pulse follows immediately after the cardiac impulse, the interval being, if not shorter, certainly not longer than in health; while in valvular disease this interval is almost always sensibly prolonged. We think it is impossible, if these signs were taken into consideration, that any difficulties could arise in distinguishing these two conditions.

As regards the stethoscopic phenomena, it must be recollected that the sounds connected with the aortic valves are generally heard most distinctly over the arch; and many murmurs *produced at the valves* are audible, as described by Dr Bellingham, at the base of the heart, but not heard below this point. We cannot help suspecting, that the murmurs heard by Dr Bellingham were really produced

at the valves; seeing that a very small incompetency will produce a considerable murmur; and we have more than once observed, in cases of dilated aorta, that the valves were incompetent without any deformity, but solely from want of due proportion to the opening. Dr Bellingham has this year published, in the *Dublin Medical Press*, a series of cases illustrative of his views on aneurism. We shall probably advert to these on some future occasion.]

IV.—PRACTICE OF SURGERY.

458.—*New Operation for Lipoma.* By M. Bonnet of Lyons.—The operation proposed by M. Bonnet consists in the subcutaneous incision of the tumour in various parts of its substance, subsequently squeezing out the fatty matter into the surrounding cellular texture; by which means the dissipation of the tumour is procured, after a longer or shorter time, by absorption. A small wound being made in the skin, a tenotome, blunt at the point, and corresponding in length to the diameter of the tumour, is passed into the opening and beneath the base of the tumour, through which it is then to be passed by cutting towards the integuments. After this the tumour is to be thoroughly broken up by numerous cuts, in every direction, through its substance. The tumour is then manipulated and kneaded, so as to evacuate the fatty matter. The operation may require repetition more than once; but it gives little or no pain, nor has it been followed by any unpleasant effects. In three cases in which he has performed this operation, the resolution of the tumour has taken place in from two to three months, there being only left a slight induration productive of no inconvenience. In one case it did not succeed; this was that of a lady, aged sixty-two years, in whom the tumour was the size of the palm, and never could be reduced to less than half the original size. M. Bonnet conceives this method to be invariably applicable to tumours which do not exceed the size of the fist. The patient is not obliged to keep his bed; and the complete absence from pain and subsequent inflammation, constitute a great recommendation of this operation as compared with extirpation.—*Bull. de Thérap.* and *Rev. Med. Chir.*, Sept. 1848.

459.—*Chloroform in Toothache.* By Mr Tomes.—Chloroform applied on a little cotton wool to the tooth will frequently remove the pain. The best form for application is made by dissolving a little gum mastic in the chloroform, whereby the fluid is thickened, and, when put into the tooth with cotton wool, will remain there a long time, and keep up its sedative influence; whereas, if the chloroform be used alone, it will be soon washed away by the saliva, and its effect lost.—*Lectures on Dental Physiology and Surgery.* 1848.

460.—*Pivoting a Tooth followed by Tetanus.* By Mr Tomes.— —— —— Esq., aged twenty-five years, tall and thin, but apparently in very good health. On his marriage trip he visited Paris, and there had the misfortune to break off a front tooth. Wishing to conceal the accident from his wife, he went immediately to a dentist. The tooth was pivoted, and the necessary concealment seemed insured. From the time of the operation, however, he had severe pain in the stump, which pain increased for four or five days, when he left Paris for Rouen. Upon arriving there the pain had become excessively severe; he consulted a medical man, but it was too late. Trismus came on within twenty-four hours, and was soon followed by tetanus and death.—*Ibid.*

461.—*Traumatic Tetanus treated by Frictions with the Tincture of Belladonna —Recovery.* By M. Bresse.—[The following case is fully and well recorded in the original. In a disease, where our most powerful therapeutic agents so often fail to ward off the fatal result, it will be well to keep in mind the mode of treatment which was, in this instance, crowned with success.]

A lady sustained a punctured wound of the right foot. The wound proceeded favourably until the twelfth day after the accident, when the foot became painful, and the puncture presented an irritable appearance; at the same time, symptoms of tetanus appeared; then gradually increased in intensity, and for sixteen days the patient suffered from the disease in its most severe form. An attempt was made to divide the nerve leading from the wound. Opium, camphor, musk, and finally quinine, were given in large doses, without permanent advantage. Death was imminent, when M. Bresse thought of trying the effect of belladonna frictions. The tincture was rubbed into the whole of the anterior surface of the body, and

also into the muscles of the back of the neck. *Quarter of an hour* afterwards, the respiration became easier, and the muscular contractions began to yield. Three ounces of the tincture were applied in this manner daily, for five days, when they were discontinued in consequence of the improved state of the patient. The rubing was practised chiefly over the contracted muscles. In three days the disease returned with nearly its former violence. The frictions were renewed, and in seven days more the patient was fairly convalescent.—*Essay on the Treatment of Tetanus, quoted in Gaz. Méd. de Paris*, September 30, 1848.

462.—*Application of Laudanum in Orchitis.* By M. Voillemier.—This surgeon envelopes the inflamed testicle in a compress dipped in pure laudanum, and covers it with oil silk; at the end of three or four hours, the organ is completely narcotized, the excruciating pains cease, and the inflammation is said to diminish rapidly.—*Gazette des Hôpitaux*, No. 77, Vol. X.

463.—*Reduction of a Dislocation forwards of the Inferior Surface of the Fifth Cervical Vertebra.* By M. Vrignouneau.—The patient fell from a tree, on his head, and lost consciousness, which, however, returned in half an hour; he then complained of violent pain at the vertex and back of the neck; the author diagnosed—how, he does not say—a dislocation forwards of the inferior surface of the fifth cervical vertebra. He bled the man, and ordered absolute rest, but without avail; and forty hours subsequently—speech having become difficult, the face injected, the respiration stertorous, and the pulse almost imperceptible—he determined to give him the chance of an attempt at reduction. For this purpose the man was seated, two assistants pressing firmly, one on each shoulder, while M. V. gently extended the neck. Partial extension rendered the speech stronger, and respiration freer, and emboldened the operator to proceed further. When he thought the extension sufficient, he carried the head and superior part of the neck backwards; this manipulation was followed by a snap, and from that moment the man recovered as by enchantment.—*Journal de Connaiss. Medico-Chir.*, and *L'Union Médicale*, tome IIme, No. 88.

464.—*Arthropathia of the Shoulder, with Atrophy and Paralysis.* By M. Velpeau.—The author gives this name to an affection of the shoulder-joint, commencing without appreciable cause, with violent pain and swelling of the brachial part of the shoulder, chiefly affecting the head of the humerus and its envelopes. This swelling increases for eight days, lasts for fifteen more, and afterwards diminishes; the shoulder then becomes atrophied and paralysed. It may remain in this state for many years, without other complication, and without compromising the general health; sometimes, however, anchylosis supervenes, and, more rarely, purulent caries of the articulation.

From the weight of the arm acting on the paralysed muscles, the head of the humerus is generally partially dislocated, but can be easily replaced. The cartilages of incrustation are absorbed, or transformed to bone; the muscles, and especially the deltoid, become ultimately membranous, with scarcely a trace of fibre; the glenoid cavity is diminished in depth, and in all its diameters; the head, and even the body of the humerus, is singularly lessened in size and length. The seat of this affection is almost exclusively the shoulder-joint; yet similar phenomena are occasionally observed in other joints, as the knee. Velpeau looks upon it as probably an affection of the circumflex nerve. He treats it, during the first period, or that of pain and swelling, by local blood-letting, repeated mercurial frictions, and emollient cataplasms; when the acute symptoms have subdued, blisters, the moxa, or the actual cautery, are more useful, conjoined with frequent baths, cold water douches to the shoulder, frictions, either dry or with some stimulating liniment, and, when all dread of inflammation is gone, gentle movements of the joint, once a-day. Two patients thus treated were cured in less than a month.—*L'Union Médicale*, tome IIme, No. 88.

465.—*Creosote in Erysipelas.* By Dr Fahnestock.—During a practice of many years, Dr Fahnestock of Pitsburgh has been in the habit of using creosote in erysipelas of the face, as well as of other parts of the body, in both its simple and phlegmonous forms, confining his local treatment to this article alone; and such has been the success of this treatment, that he states he has yet to witness a case which has not yielded to it.

He applies the purest creosote, with a camel's hair brush, over the whole of the affected surface, extending it some distance beyond the inflamed part, and, at the same time, administers a dose of calomel, followed by a sufficient portion of jalap to insure free catharsis. This, in the majority of cases, is all he finds necessary.

But when the mucous membrane of the mouth and fauces is also affected, he pencils those parts with a solution of the nitrate of silver, say from half a drachm to a drachm in an ounce of distilled water.

In the phlegmonous form, it will be found necessary to repeat the application more frequently than in the simple, with the addition of a bread and water poultice, applied nearly cold, and well sprinkled with water strongly impregnated with the creosote, or a cloth, kept constantly wet with the solution.

The creosote, when applied, should cause the parts to become white immediately; if this does not occur it is not pure. Thus success depends upon having the best quality of creosote. It is worthy of remark, that the skin does not become in the least marked by the application, no matter how often it is repeated.—*American Journ. of Med. Sciences*, July 1848.

466.—*New Instrument for Tracheotomy.* By Dr M. Hall.—Dr Marshall Hall has devised an instrument for the performance of this operation, of which the following is a description:—

The instrument consists, first, of a cylinder of steel, of a proper diameter, with its lower edge extremely sharp, as in a gun-punch; it may be either circular or oval. Within this cylinder a piston moves, which may be removed altogether; whilst another cylinder, of which one side overlaps the other (as in Charrière's speculum), admits of being compressed, and introduced in its place. This latter cylinder is pushed forward, so as to project beyond the cutting edge of the former, expands, and makes gentle pressure, so as to prevent hemorrhage; the steel cylinder is then removed. Finally, two-thirds of the inner cylinder allows of being removed, at a part to which a silver disc or shield is attached.

The instrument being placed over the trachea, a portion is detached, and forced into the cylinder as the piston is drawn upwards, and the operation is performed without loss of blood; the silver cylinder being then introduced, it is shortened, and the disc attached.—*Lancet*, Sept. 9, and *Prov. Journal*, Oct. 18, 1848.

467.—*Cure of Hydrocele by Compression.* By M. Rossi.—M. Rossi relates the case of a man labouring under hydrocele, who consulted him after he had been punctured several times. A perfect cure was obtained by compression of the tunica vaginalis, by means of a sheet of lead applied on each side of the scrotum, precaution being taken not to interfere with the cord or testicle.—*Annali Universali*, and *Prov. Journal*, October 18, 1848.

468.—*Blistering the Eyelids in Affections of the Cornea.* By M. Velpeau.—In affections of the cornea, attended either by interstitial deposition of lymph or the formation of pus threatening penetration, M. Velpeau has found blistering the eyelids extremely useful during the last eighteen years. In conjunctivitis or iritis the practice is of no great utility; but in keratitis, and inflammation of the anterior chamber, no means is so efficacious. It dissipates the sanguineous engorgement, prevents or arrests the plastic effusion, and favours its absorption if already deposited. It cleans the ulcers, and is very efficacious in preventing suppuration and softening of the organ. It is an error to suppose that it is mischievous when employed in the acute stage; but its use requires some precautions. The skin of the eyelids is to be first rubbed with vinegar, and they are to closed without being contracted. The blister is so applied as to secure contact in every part, a pledget of lint laid over it so as to fill up the orbital cavity, and the whole to be secured by a bandage. When the blister is removed next day, the eyelids are found more or less swollen, and it is not until this has subsided that we can judge of the effect. In this way it may be renewed three or four times.—*Gazette des Hôpitaux*, No. 80, and *Brit. and For. Med. Chir. Rev.*, Oct. 1848.

469.—*Fracture of the Neck of the Femur within the Capsule: Bony Union.* By Dr Condit.—Dr Condit reports a case of fracture of the neck of the femur, in a man aged eighty. The accident happened in May, and the patient died in November following. The following are the *post-mortem* appearances:—

"The muscles and other structures around the cervix femoris were more pale than usual; the capsular ligament was entire, giving no appearance of laceration. The ligamentum teres was vascular, the acetabulum normal in appearance. The neck of the femur was shortened, and the fracture was discovered to be wholly within it. The head of the bone had been broken across transversely, exactly where it joins the neck. The ridge, characteristic of the seat of fracture, had been thrown out, and the re-union was firm for more than three quarters of the circumference of the bone. The limb having been drawn up by the contraction of the muscles, a considerable angle was formed by the head and neck at their point of juncture, but they were as firmly united

by osseous formation as if they never had been separated. On the upper side, where the fractured edges were not in apposition, union was not yet complete, but ossification was going on upon all the broken surface, and had the patient lived a few months, would doubtless have been perfected. Could the state of the injured part have been by any means ascertained, and had not the condition of the ankle forbidden it, the patient, I think, might safely have walked; there was sufficient firmness at the fracture for the limb to have contributed its share of support to the trunk. From a fear lest some accident should befal the specimen in handling it, I left it with a mechanic to have the head protected by a covering wire. He placed it for safe keeping in a desk in his room, belonging to another man, who, removing the desk in his absence, threw out the bone, supposing it to be of no value; and, though diligent search was made, it was not recovered. I had the preparation in my possession for two or three years, and, during that time, it was shown to many members of the profession, who expressed but one opinion, that it was a case in which a *complete fracture entirely within the capsule was re-united by ossification.*"—*American Journal of Medical Science*, July 1848; *and Prov. Med. Journ.*, Oct. 1848.

V.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

470.—*Statistical Researches on Obstetric Auscultation.* By Professor Hohl.—Since 1833, when Professor Hohl published an interesting and important memoir upon this subject, he has continued his statistical researches, and has now again laid the results before the profession.

1. *The Position of the Sounds of the Fœtal Heart and of the Placenta.*—Up to 1833, our author's observations had been made upon 200 pregnant women, and from these he at that time laid down the following deductions:—The pulsations of the fœtal heart are generally heard on the left side of the mother. The utero-placental souffle is perceived more frequently on the right side than on the left; it is rarely heard low down, and never in front.

More recent researches upon 500 women have confirmed these original results. The pulsations of the fœtal heart were found 316 times on the left side in cephalic presentations, and 159 times on the right. The utero-placental souffle was found 256 times on the right, and 168 times on the left side; once it was heard in front, and 50 times it was found low down on either side, and among these 50 there were 13 cases of placenta-prævia.

2. *Relative Positions of the Fœtal Pulsations and of the Placental Sound to one another.*—Further, in the 316 cases where the pulsations of the fœtal heart were heard on the left side, the utero-placental souffle was heard in 256 of them on the opposite or right side. Again, in the 168 cases where the utero-placental souffle was on the left side, the pulsations of the fœtal heart were heard in 159 of them on the opposite or right side. The two different sounds were 102 times on the same side; and among these 102 cases, the umbilical cord was found twined around the child in 51 cases. The placental sound was found in 50 cases low down on either side. Of these 50 cases, 13 had the placenta attached over the cervix uteri, and the fœtal pulsations were heard higher up than usual. But the placental bruit was always stronger on one side than another, and its greatest intensity always corresponded to the side opposite that on which the fœtal heart pulsations were heard.

3. *Seat of the Utero-placental Souffle.*—M. Hohl is convinced that the seat of the utero-placental souffle is in that part of the uterus which corresponds to the insertion of the placenta. He founds this opinion upon the following reasons:—1. In 21 cases where he has been obliged to complete the delivery artificially, he has found the placenta adhering to the uterus at the exact point where he had originally heard the bruit. 2. In 15 cases where the placenta was inserted over the os uteri, the souffle was heard very low down, at a point where it is ordinarily less distinct than any where else. This indistinctness may possibly arise from the walls of the uterus becoming more attenuated inferiorly than elsewhere, or from the urinary bladder intervening between the substance of the uterus and the ear, or else because, when the placenta is inserted in this situation, there is generally some hemorrhage from it. 3. In 10 cases, M. Hohl has verified by *post-mortem* examination the diagnosis which he had formed during the patient's life, of the position of the placenta. The Cæsarean section was performed after death upon two of these women, and the eight other women died during pregnancy. 4. In 8 cases of version, the placenta was felt by the hand in the exact position as determined before delivery.

M. Hohl proposes to make use of this circumstance, in enabling the accoucheur to avoid prematurely separating the placenta in cases of turning. 5. In a case of extra-uterine pregnancy, where the fœtal heart's pulsations were heard on the right side and high up, and the placental bruit on the left side and low down, and where the mother died, the autopsy verified these positions made out during life. 6. In 12 cases of pregnancy with twins, one bruit de souffle only was heard when the placenta was single, and a double bruit when the placentæ were distinct. In one of the cases where the souffle was heard on both sides, and where the operation of turning was required, M. Hohl assured himself that the two placentæ were attached, one on each side of the uterus. 7. In a very great number of cases, the extent and intensity of the placental sound has been found to correspond with the size and thickness of the placental mass.

4. *Auscultation in the Diagnosis of Pregnancy.*—In the immense majority of cases the obstetrical sounds can be discovered by auscultation. Nevertheless, there are cases where no bruit is heard, and in which pregnancy may remain doubtful. The presence of the heart sounds is a certain sign that the infant is alive; but their absence, especially in early pregnancy and during labour, is no certain sign of the infant's death. The placental souffle may be heard long after the death of the fœtus.

5. *Auscultation in the Diagnosis of Plural Pregnancies.*—Our author thinks that in most cases it is quite possible to make out the presence of two fœtuses, unless one of them be dead, or the pulsations be isochronous to one another, or unless one infant lie in front of the other. Our author's observations have extended to 16 cases. In 12 of them he made out the pulsations of the two fœtal hearts; in 10 of these 12 cases, one heart was heard on the right, the other on the left side; in the other 2 cases, both were heard on the left side. In the 4 remaining cases the pulsations of only one heart were heard. Of these 4 cases, in 3 of them one of the infants was dead; in the 4th both were living.

In 7 cases the bruits de souffle were heard respectively at the right and left sides. In 9 cases it was heard at only one side; namely, 7 times on the left only, and 2 times on the right. In these last 9 cases the placenta was common to the twin fœtuses; but where the bruit was heard in two separate places, there were two placentæ. Thus, we may diagnose a double pregnancy when the bruit de souffle is heard in two places, although only one fœtal heart is heard; also, when two fœtal hearts are heard, although the bruit de souffle is heard in only one part. The extent of surface over which the placental bruit is heard, affords no certain sign of the placenta being either double or single.

6. *Auscultation in the Diagnosis of the Position of the Fœtus.*—In 290 cases of the first position of the fœtal head, or where the occiput looks towards the left foramen ovale, the pulsations of the fœtal heart were heard 281 times on the left side, 5 times on the right, and 4 times not at all. In the same 290 cases the utero-placental souffle was heard 251 times on the right, 30 times on the left, (among these 30 there were 29 cases where the cord was turned around the child), and 9 times low down on both sides, but more on the right than on the left side. In the 5 cases where the pulsations of the fœtal heart were heard on the right side, the bruit de souffle was in 1 case on the left and in 4 on the right side (in these 4 cases the cord was twined around the child).

In 148 cases of the third position of the fœtal head (the occiput pointing to the right sacro-iliac synchondrosis), the position of the fœtal heart was 132 times on the right, 10 times on the left side; in 6 cases it was not heard at all, the infants being dead. The bruit de souffle was heard 90 times on the left, 38 times on the right (in these 38 cases, the cord was twisted around the child in 22 of them), and 8 times low down on either side, but more towards the right than the left; in 42 cases it was not heard.

Hence it follows, that in the first or occipito-anterior position the fœtal heart is heard on the left, and in the third or occipito-posterior position, on the right side. The diagnosis of the position becomes more certain, if, at the same time, the bruit de souffle is heard on the opposite side. If the two sounds are heard, both on the same side, there is a strong probability that the cord is twined around the fœtus.

In 6 cases of the first position of the face (forehead to the left foramen ovale), the fœtal pulse was 3 times heard on the right and 3 times on the left side. In the first 3 the utero-placental souffle was 2 times on the right, in 1 case on the left side; in the second 3 it was 1 time on the left side and 2 times its position was not noted. In 2 cases of the third position of the face (forehead to right sacro-iliac synchondrosis,) the heart pulsations were

on the left, the souffle on the right side.

In the positions of the breech, the fœtal pulse was heard higher up in the uterus. In 6 cases, having the sacrum of the fœtus directed to the left foramen ovale, the pulsations of the fœtal heart were heard on the left side, and the souffle 5 times on the right and 1 time on the left side. In 3 cases, having the sacrum of the fœtus directed towards the right foramen ovale, the fœtal pulse was heard on the right side, and the souffle in 2 of the cases was on the left. In 2 cases having the sacrum of the fœtus directed to the left sacro-iliac synchondrosis, the fœtal pulse was on the left, and the souffle on the right side.

In 7 cases, where the right shoulder presented, the head of the fœtus lying on the left side and the back looking in front, the fœtal heart was heard immediately above the pubis; but in 5 cases a little to the left, and in 2 a little to the right. The utero-placental souffle was not heard but 5 times; of these, 4 times on the left side, and high up; in 1 case on the right In 3 cases where the left shoulder presented, the fœtal heart was heard on the left side; in one of these the head was towards the left side and the back in front. The fœtal heart was heard best in the mesial line in 2 cases where the head was towards the right and the back in front.—*Neue Zeitschrift für Geburtskunde*, T. xxii. 1847; and *Archives Générales de Medic.*, Aout 1848.

471.—*Use of the Stethoscope in Protracted Labour.* Professor Simpson and Drs Hardy and M'Clintock.—In accordance with the general principles and practice of the Dublin school, Drs Hardy and M'Clintock maintain; 1. That, in the vast majority of instances, the death of the fœtus during the progress of a tedious labour can be positively ascertained by the aid of the stethescope; 2. Before perforation for difficult labour, the death of the fœtus ought, as an almost invariable rule, to be waited for. An objection (say they) has been advanced against the use of the stethoscope in difficult labours; namely, that the evidence it affords of the child's vitality might induce the accoucheur to put off giving assistance too long, or till the woman's symptoms had assumed so formidable a character as to render the operation fruitless. Such cases (they allege) are of extreme infrequence. But many examples might be cited from the work of Drs Hardy and M'Clintock, and the older one of Dr Collins, to show that formidable symptoms do *not unfrequently* supervene during protracted labours and before the death of the child. And, even were it allowed and yielded that *during* labour formidable symptoms seldom occurred from this waiting for the child's death, still the baneful influence of that waiting produces its own certain and injurious results, *after labour*, upon the recovery. It was shown (*Retrospect* for August) that every hour added to the mere duration of labour, as certainly entailed danger to the mother, as the allowing of bad symptoms to spring up during labour. And the opinions and arguments of Dr Simpson (quoted below) appear to show, that this waiting for the child's death is as unnecessary as it is injurious to the mother; and also to demonstrate that, by other means than perforation, we can (to use Drs Hardy and M'Clintock's own words, p. 133), "by timely interposition, save the woman hours, perhaps, of fruitless suffering, and thereby greatly diminish her risk of danger." Our authors state, 3. That after the child has perished in the course of a laborious labour, bad symptoms ought not to be waited for to indicate instrumental interference, as nothing can thereby be gained, and the patient's life may be compromised by such culpable procrastination.

Such are the general rules in regard to interference with the crotchet and the use of the stethoscope in difficult labours, which regulate the practice of the Dublin school of midwifery. In his memoir on turning, Dr Simpson takes occasion to make some remarks on this subject, and maintains that "the mighty boon which auscultation offers us in protracted parturition is quite different, and far more important. For it is not by any means so valuable in often affording us evidence that the child is dead; it is not so much of real and practical use in showing us that we may now perform embryotomy upon a dead infant, as in showing us *when*, in protracted cases, we ought to extract the child by the forceps, turning, or other safe means, if we wish to *preserve* its life, as well as the life of the mother. In this way I have repeatedly found auscultation of incalculable benefit in protracted labours, and been, I believe, enabled by its evidence alone to save several times the life of the child by the timely application of the long and short forceps. And though the principle upon which I have thus acted in the management of tedious labours is not acknowledged by Dr Collins under that subject, yet, certainly, the very same principle of using instrumental delivery for the sake of the safety of the child is acknowledged by him under another head, and in dependence upon an-

ether form of evidence of the danger of the infant." In speaking of the treatment of cases of prolapsus of the umbilical cord he observes :—"The forceps I consider highly desirable when the child is so situated that the head can be reached with safety; but as the funis generally descends at the commencement of labour, it is very seldom that this instrument is applicable till fœtal life is extinct. We should not fail, however, to apply them when practicable, should any delay occur in the delivery likely to endanger the life of the child, or if we find *the pulsation in the cord becoming gradually slower and more feeble*." Now, exactly on the same principle when in tedious labours (in which there is no contra-indication), we have evidence by hearing, that the life of the child is becoming endangered; when by the stethoscope we learn that the pulsations in the fœtal heart are becoming gradually slower and more feeble, it is our bounden and solemn duty to interfere, in order to attain the preservation of the infant's life. For neither in principle nor in practice does it make any difference whether with this view we ascertain the imminent danger of the child, and the fact that the pulsations of its heart are becoming slower and more feeble, by *feeling* the pulsations of the cord, or by *listening* to the pulsations of the heart itself. The sense of hearing affords us precisely the same evidence in the one case as the sense of touch affords us in the other, and it indicates also precisely the same line of treatment. —*M'Clintock and Hardy on Midwifery and Puerperal Diseases*, 1848 ; *and Provincial Medical and Surgical Journal*, February 23, 1848.

472.—*On the Use of the Vectis.* By Drs Hardy, M'Clintock, and Colby.—In the Dublin hospital the vectis has been very frequently substituted for the forceps. Sometimes it happens that the vectis will fail in accomplishing delivery, even though used by skilful and experienced hands, and where the case seems well adapted for it ; under these circumstances it has to be withdrawn, and the forceps applied. This is a great objection to the instrument, but one which may be entirely obviated by using, as a vectis, one blade of the forceps, the advantage of which is, that if delivery by this means be found impracticable, it is only necessary to pass up the second or sacral blade, and, having adjusted it, to fix the lock, which being done, the operator may proceed as in an ordinary forceps case. This was the practice usually followed in the Dublin hospital, and in nearly all the vectis cases it was a blade of the forceps which was employed. For the effective use of the vectis, it is generally found needful that some uterine action be present; but it matters not though this be small in amount, for the introduction of the instrument seldom fails to increase the strength and frequency of the pains. The vectis was never used in the hospital, except in cases that would have equally justified the use of the forceps.

"By means," says Dr Coley, "of the vectis which I have been in the habit of employing with invariable success during more than forty years, I have usually effected delivery under the ordinary circumstances requiring instrumental assistance; but I have uniformly completed the operation with safety to the mother, and almost invariably to the child, even when delivery has been considered in consultation quite impossible, except by embryotomy. Hence I have never had occasion, under any circumstances, except extreme distortion of the pelvis, to open the head of the child ; and I am much pleased to find that barbarous operation condemned of late by some of our best obstetric practitioners as morally unjustifiable, and a proof of the want of experience and manual skill in the operator. When the practitioner in attendance cannot command the assistance of a skilful obstetrician in these cases, it would be always more safe and becoming for him to turn and deliver by the feet, than to sacrifice the life of the child under the pretence that embryulcia, because easily performed, is the only expedient practicable. The numerous instances in which I have by means of the vectis delivered women of living children, after it has been considered in consultations that the latter were dead, and that delivery was impossible without the destruction and laceration of the child, convince me that great and unnecessary destruction of fœtal life and lamentable inexperience prevail in the practice of midwifery."—*On Midwifery and Puerperal Diseases*, 1848 ; *British Record of Obstetric Medic.* Oct. 1, 1848.

473.—*Black Vomit during Labour.* By Drs Hardy and M'Clintock.—The occurrence of vomiting during the second stage of labour is always considered a grave symptom. When a symptom of rupture of the uterus, it comes on suddenly, and is accompanied by other indications of that accident. Our authors have seen three cases of coffee-ground vomit during the second stage of labour, and without the presence of any circumstance adequate to account for so formid-

able a symptom. In all the three cases, the women had been for a long time previously subject to dyspepsia. They all recovered. They have also seen one case where the dark vomiting came on before the os uteri had begun to dilate. It was so severe, that it was deemed necessary to stop the uterine action altogether by means of opium. After some refreshing sleep, labour recommenced, and the patient did well.

In one case, where the matter vomited was examined, it was found to consist of a transparent yellowish fluid with dark flocculi, consisting of blood and epithelium. — *On Midwifery and Puerperal Diseases*, 1848.

474.—*Statistics of Labour.* Professor Casper.—1. The greatest number of labours is completed between nine o'clock in the evening and six in the morning; the smallest number, on the contrary, takes place from nine o'clock in the morning till six in the evening. 2. The pains of labour commence most frequently between midnight and three o'clock in the morning, and seldomest from six to nine o'clock in the morning. 3. The influence of the night is greater at the commencement than at the end of labour. 4. The labour commences oftenest during the day, when the infant is male; oftenest during the night, when it is female. 5. The duration of labour is increased when the pains commence during the night. 6. A greater number of children is still-born during the night than during the day.—*Abeille Médic.* and *Gazette des Hôpitaux*, Sept. 16, 1848.

475.—*Rupture of an Unimpregnated Uterus, from a Collection of Pus in its Cavity.* By Dr Guzzo of Naples.—A woman, æt. thirty-four, liable from puberty to uterine pains and irregularities, married, but childless, came under Dr Guzzo's care in June 1837, when he found the uterus as enlarged as at the fifth month of pregnancy, and in a twelvemonth after it nearly had reached the umbilicus, occasional colourless discharges being observed. She continued to live until 1841, the tumefaction still increasing, when, after the use of a purgative, peritonitis was induced, and in a few hours she died. A large quantity of pus was found in the abdomen, and the uterus adhered to its parietes from the pubis to the umbilicus, filling up the iliac and hypochondriac regions, and was covered by the omentum. The cavity of the womb contained an enormous quantity of inodorous white pus, various irregular hypertrophic formations being developed on its inner surface. Its walls were thickened, and contained in their substance tubercular masses, varying in size from an olive to a walnut, some being crude, and others suppurating. Some of these tubercular abscesses were just on the point of opening into the cavity of the uterus, and a rupture had taken place at the posterior surface of the organ.—*Archives Générales*, XVII. 104, and *Brit. and For. Med. Chir. Review*, Oct. 1848.

476.—*On Milky Tumours of the Female Breast.* — Mammary tumours, resulting from a collection of milk, are found in one of two distinct conditions. They are either liquid or solid. Dupuytren and Sir Astley Cooper relate cases of the fluid milky tumour; and Scarpa has recorded an extraordinary instance, where the swelling was more than thirty inches in circumference. The different modes of termination of these collections have been particularly discussed by M. Forget, in an interesting memoir—(*Bullet. de Thérapeut.* Vol. XXVII., p. 355). "It rarely happens," says he, "that the milk remains in a fluid state, unless the secretion is constantly kept renewed by continued lactation or a succession of pregnancies. Most commonly its physical and chemical properties are changed, and that, in a manner varying, according as one or other of the constituents of the milk is absorbed."

"If the caseous matter is resorbed, the serum is left alone, and to the lactocele proper succeeds a cyst, filled with a troubled humour containing flocculi." These cysts are, in all likelihood, formed by the dilatation of lactiferous ducts, as is well shown by the observations of Sir Benjamin Brodie, who has seen several cases where pressure on the tumour made the serum escape, or even squirt from the nipple.

Sometimes, but rarely, inflammation attacks the cyst, giving rise to the formation of an abscess. In these cases the inflammation is probably the result of extravasation of the milk, either from rupture or perforative ulceration of the cyst.

Lastly, and most frequently, the fluid elements of the milk are resorbed, and that which remains may assume different degrees of consistence. Hence arise the cheesy, butyraceous, and stony tumours of the mamma. Lately a case of this kind presented itself at the clinique of M. Velpeau. A tumour of the size of an egg was found in the mamma, immediately below the nipple, not painful or tender, and accompanied by no discoloration of the skin. It was extirpated, and the dissection afforded the following

very interesting results:—The tumour was composed entirely of the proper mammary tissue. Around the chief cyst there were several smaller, of the size of a pea, and pointed in front towards the nipple; the point ending in a lactiferous duct. Each of the smaller cysts was filled with a substance having all the characters of butter; and the principal cyst with matter exactly resembling cream cheese. On a minute examination, no epithelial scales or cholesterine were discovered; elements which are always found in meliceratous and atheromatous tumours. Sometimes, but rarely, the milk loses all its fluid constituents, and seems to change into a true calculus, similar in many respects to those observed in the salivary ducts.

Contrary to the opinion of our author, we believe that such tumours seldom demand the operation of excision.—*L'Union Médicale*, Sept. 26, 1848.

VI.—MATERIA MEDICA AND THERAPEUTICS.

477.—*On Digitaline.* By Dr Hrevieux.—MM. Homolle and Quevenne, the discoverers of the active principle of *digitalis purpurea*, have pursued a patient course of investigation into its properties, and MM. Bouchardat and Sandras have since made numerous experiments upon these; but although they have fully exhibited the pharmaceutical and physiological properties of the substance, clinical observations are yet wanting, and it is to supply some of these that the author in the present paper details the results of its employment in several instances by M. Rayer.

These observations show that in doses of from 1 to 2, or even 3 milligrammes, the medicine does not produce repugnance by its bitterness, or cause any ill effects, as vertigo, headache, &c. In every case it lessened the *rapidity of the pulse;* the mean difference oscillating between 22 and 36, the maximum being 48, the minimum 12. No immediate effect, was, however, produced on the pulse, the greatest change occurring generally five or six hours after. After a while it recovered itself again, and it required a week or two's use of the drug, to make a permanent impression on it. Its effect on the *urine* was constantly observed, this fluid in most cases being augmented one half, in a less number a third or a fifth; and yet in a less number still, quadrupled or quintupled.

The medicine is indicated in disease of the heart and in dropsy; it allays the dyspnœa of phthisis, calms the cough, and procures repose. It is useful in nervous palpitation, and in all accidents resulting from too violent an impulse given to the course of the blood. This preparation is said to be preferable to all others, in the certainty of dose which can be attained. Comparative experiments made by MM. Homolle and Quevenne, show that digitaline is one hundred times more active than the powder of digitalis.—*Archives Générales*, tome xvii. 164-84; *and Brit. and For. Med. Chir. Review*, Oct. 1848.

478.—*Removal of Nitrate of Silver Stains.* By Mr Parsons.—Two methods are proposed by Mr Parsons. Both consist in the conversion of the silver stain into the chloride of silver, and then washing out the chloride with a solution of the hydrochlorate of ammonia, in which it is very soluble.

The first method consists in applying to the stain a solution of the chloride of lime, and then washing the chloride of silver out with a strong solution of the hydrochlorate of ammonia; but this method, from the application of the chloride of lime, cannot be used when the stain is upon coloured articles.

From the poisonous nature of the materials used in the following method, it ought not to be employed when the former is available; it, however, has the long sought for desideratum of removing silver stains without destroying the colour of the article stained. This process is simply that of washing the stain with bichloride of mercury dissolved in a solution of hydrochlorate of ammonia. In this process the bichloride of mercury is decomposed, and the chloride of silver so formed is at the same time removed by the hydrochlorate of ammonia. By one application the so-called "Indelible Ink" is instantly effaced.

The reduction to a single process by this method, and its not injuring colours, are desiderata not possessed by any other process; and in addition to these advantages may be mentioned the cheapness and ease with which the articles used can be procured.—*Lancet*, Sept. 9, 1848.

479.—*Therapeutic Properties of the Oil of Juniperus Oxycedrus.* By M. Dieu.—By the combustion of this juniper a sort of liquid tar is obtained, known in France

by the name of *huile de cade*. This appellation, however, has been indiscriminately applied to all the liquid tars obtained by the combustion of coniferous woods, and by some, on the other hand, it is restricted to the volatile liquid procured by distilling the *huile de cade*. This oil has a blackish colour, bitter taste, and a strong odour resembling that of tar.

In veterinary medicine it is used in the treatment of cutaneous affections of the horse, and in the south of France it has been long famous as a popular remedy in these diseases in the human subject.

M. Serre was the first to draw the attention of the profession to its value as a local application in the treatment of itch, eczema, lichen, and other affections of the skin; but it was more especially in that most obstinate of diseases, scrofulous ophthalmia, that its employment had been accompanied by success. M. Devergie, physician of the Hôpital St Louis, has been enabled, by extensive trials, to confirm the results obtained by M. Serre.—*Traité de Matière Médicale et de Thérapeutique, par S. Dieu*, Paris 1848.

480.—*Test for Cod-Liver Oil.* By Mr Hockin.—Mixing together on a porcelain slab four parts of genuine cod-liver oil, and one part of strong sulphuric acid, and stirring with a glass rod, a beautiful and rich violet colour, similar to that of the fumes of iodine, is produced, which in a few instants passes gradually into a dirty brown; the altered portion of the oil separating in regularly shaped patches from that out of reach of the acid. This characteristic is not possessed by either olive, almond, seal, whale, or fine sperm oil; nor, Mr Hockin believes, by any other fat oil. The reaction varies in appearance from a delicate fawn to dark caramel.—*Medical Times*, Sept. 23.

481.—*Carbonate of Ammonia in Squamous Affections of the Skin.* By M. Cazenave.—In psoriasis, and other scaly diseases of the skin, M. Cazenave has obtained considerable benefit from the internal employment of this remedy. He gives it in the form of syrup, in doses of from 6 to 30 grains daily. The physiological effects are, complete anorexia, general debility, rapid emaciation, occasional diarrhœa, and some febrile excitement of the pulse; the countenance becomes paler. Some patients were obliged to discontinue the use of the drug, on account of the severity of these symptoms.—*Gaz. des Hôp.*, Sept. 14.

VIII.—DIETETICS, HYGIENE, AND MEDICAL POLICE.

482.—*Diseases of the Mercury Miners at Almaden in Spain.*—Jussieu has remarked that the miners, who were inhabitants of the district of Almaden—who worked voluntarily on the mines, and changed their linen and clothes—preserved their health and lived like other men; whilst the convicts and slaves who worked by compulsion, took their meals in the mines, and did not attend to cleanliness, were subject to swelling of the parotids, aphthæ, salivation, and pustular eruptions over the body. At present there are neither convicts nor slaves in the mines, and the condition in which these formerly were, is observed only in the workmen who come to the mines from a distance. There is a great difference in respect of their hygiene between the miners, natives of Almaden or its vicinity, and those who come from other quarters. The natives enter young into the mines; become gradually habituated to them; they learn from their parents what are the dangers to be avoided; and, having their houses and families, they enjoy greater comforts than the strangers. Thus it is only among them that are found the instances, and these but rarely, of persons in good health after thirty or forty years' work in the mines. "As soon as a little boy of the country," wrote Lopez de Arebado, "is able to carry a load of twelve pounds, he enters the mine, and begins to help the workmen. His labour increases with his years, and changes in its nature by degrees; but there he spends his life, which ordinarily is not more than sixty years. During the twenty-three years that I have been physician of the town, I do not remember a dozen persons who have lived to the age of seventy." One or two native miners have attained the age of fifty-five or sixty, with but slight mercurial affection, and otherwise with good health; but such examples are not met with among the strangers. They are mostly wretched creatures without any other resources, whom necessity has driven to the mines of Almaden from La Mancha, Estremadura, and especially Gallicia and Portugal. They take no care of their persons, either because they do not know, or do not care for the consequences of their carelessness. Instead of rinsing their mouths and washing their

bodies with tepid water, on coming out of the mine, changing their linen and clothes, and taking healthful exercise before eating or sleeping, they take their meals with dirty hands in the subterranean excavations; and, as few of them possess a change of raiment, they are seen coming from the mines without any of these precautions, and going away sweating, with their skin, hair, and clothes impregnated with mercurial particles, to indulge the tendency to sleep which oppresses them, or to seek enjoyment in amusements, spirituous liquors, and all manner of debaucheries. Consequently the deleterious influence of the work in the mines produces the most disastrous effects on these unhappy people.

The characters and violence of these effects vary according to other circumstances. Lopez de Arebado affirmed that some of the workmen never had any affection but tremors, others only the mercurial salivation. He had remarked that intemperate and thin subjects were more liable to the trembling, whilst unhealthy cachectic individuals were more commonly affected in the mouth. These remarks are conformable to what is observed at present. The different powers of resistance to the action of the mercury manifested by different workmen, can be explained only by differences of temperament and idiosyncrasy. Thus, as a general rule, sanguine corpulent men, succumb to it more rapidly, than those who are thin and of nervous temperament. It is certain, also, that those who have entered the mines young, and become habituated, never suffer those sudden and violent attacks by which new-comers are so frequently rendered incapable of working.

Some parts of the mines are more insalubrious than others. They seem to be chiefly those deeper galleries where the ore is richest in mercury, and the ventilation most imperfect.

The most dangerous occupations in the mines are the digging the ore, and working the pumps. Those who are employed at the latter labour, and are constantly exposed to wet, suffer, besides the proper effects of the mercury, articular pains and thoracic inflammations. Of the workmen employed outside the mines, all are liable to suffer more or less from the mercury; but the most hazardous employment is that of those who superintend the distilling furnaces, and who live in an atmosphere in which mercury is continually in vapour, as is shown by the myriads of globules of the metal, which can be seen to occupy all the crevices on the outside of the furnaces.

The inhabitants of the town of Almaden do not suffer from the effects of the mercury, although the smoke of the furnaces is often carried by the wind over the town. This is probably owing to the condensation of the mercurial particles before they reach that distance. In the enclosure called Brutrones, where the furnaces are situated, the animals which are allowed to graze there are liable to mercurial tremors. The mules, especially eight which move the machinery for the extraction of the cinnabar, are generally healthy; but an officer of the mines affirms, that several times when they have been killed mercury has been found in their bones (!)—*Correspondent of L'Union Medicale*, No. 116.—(*To be continued*).

483.—*Health of Workmen in White Lead Factories.* M. Versepuy, *pharmacien* at Riom Masle, on 17th April read a communication to the Academy of Sciences relative to the manufacture of white lead. He considers the process known as the Dutch method, as well as that of Liebig, as being an organized system of manslaughter in the manufactory, but he does not consider it possible to replace, as has been proposed, white lead by white oxide of zinc, in its various uses in the arts. He has therefore been led to adopt, after twelve years' experimental trials, a modification of the processes in common use, which deprives them, as far as possible, of their dangerous characters. In his method the white lead is prepared in close vessels. It is removed from these mixed with water, so that the powder does not diffuse itself through the air of the manufactory. The workmen do not touch it or inhale it; their only contact with it is, under certain precautions, putting it in the drying stove and removing it. The exemplification of the method is most complete, and the process is so accelerated, that twenty-four hours suffice for that which on other methods requires forty days at least. The system has begun to show itself in its good effects on the workmen.—*Gazette Médicale.*

[We presume M. Versepuy's process is some modification of the method now followed in this country, as well as on the continent, of transmitting carbonic acid gas through a moist mixture of litharge and acetate of lead.]

484.—*On the Hygienic Influence of Cutting the Hair.* By M. Fredericque.—Medical men are occasionally asked whether it is proper to cut the patient's hair; whether, in fact, this operation has any influence upon the health. M. Fred-

ericque resolves the question by giving the following illustration :—

A little girl, aged three, of good health in general, had her hair grow excessively long during the course of a few months. She was a beautiful child, but had latterly wasted without any apparent cause, becoming dull and apathetic, losing her appetite and strength without any organic lesion being discernible. There was an anæmic bruit in the carotids. She was placed upon a tonic regimen, with chalybeates, but without deriving material benefit, until her hair was cut short at the suggestion of a friend, from which time she rapidly gained strength.

It would appear from this case that the economy had suffered a loss in the expenditure of blood necessary for the secretion of the abundant crop of hair. M. Fredericque considers that it is the formation of the colouring matter which chiefly exhausts the blood, as this is formed at the expense of the hæmatosine.—*Annales de Société d'Emulation; Revue Médico-Chirurgicals.*

485.—*Prophylaxis against Poisoning by Salts of Lead.*—A report by M. Richeteau on some points relative to the pathology and treatment of saturnine affections, has led to the appointment, by the Academy of Medicine of Paris, of a committee to inquire into the whole questions relative to the poisonous action of lead salts, and especially as to the means of preventing them. Among the more important points of inquiry will be the question, as to whether the lead salts, to prove injurious, must be soluble or not, as to the effect curative and hygienic of chemical neutralizing exerts, and as to the modifications of manipulation which will render the preparation of lead compounds less injurious.—*Gazette Médicale de Paris*, June 14, 1848.

[We would point to this proceeding on the part of the Academy, as an example of the way in which accurate information may be obtained regarding important hygienic questions like this, about which much has been written, but comparatively little accurately ascertained.]

486.—*Lamps without Smoke.*—As it is notorious that the gases resulting from the combustion of lamp oil are prejudicial to health, we are induced, in a hygienic point of view, to extract from the *Journal de Chimie Médicale*, the following account of a process by which the inventor asserts that the smoke is avoided. Make a saturated solution of common salt, dip your wick into it, and allow it to dry thoroughly. Mix afterwards the saline solution with oil, taking equal parts of each —agitate briskly for some time; let the mixture rest until all the oil has risen to the surface, and decant the latter, which is then fit to be used with the wick prepared in the manner above mentioned. The author states that the flame is more brilliant, and that it lasts longer than that produced from common oil, besides giving no smoke.—*Lancet*, 17th June 1848.

487.—*Influence of Hygienic Circumstances in the Development of Cholera.* By Dr Korefe.—Of about 700 individuals, male and female, employed in a cotton factory in St Petersburg, the larger half was lodged within the precincts of the factory, fed at a common table, and lived under strict superintendence. The rest, above 300 in number, lived in the town with their families. In the former, or larger half, there were, from 14th June to 10th August, eighty-three seizures, and of these five died; while of the latter smaller portion 120 were taken ill, and of these forty-four died. It is worthy of note, that those who lived in the factory, and whose mortality was smaller, were all of the *serf* class; while the others were all free citizens.—*Gazette des Hôpitaux*, Sept. 12, 1848.

488.—*Cholera in Lower Egypt; unusual Mode of Development.* By M. Willemin.—M. Willemin, officer of health at Cairo, states a remarkable fact in reference to the present epidemic of cholera in Lower Egypt. At Boulac the disease raged principally in the northern half of the town, which is entirely composed of large and well-aired houses, the abodes of the rich. The southern part, on the contrary, which contains the filthy and ill-ventilated dwellings of the poor, and more especially the bazar, ordinarily the abode of pestilence, was spared. At Cairo, a similar circumstance was observed: the north-west division, rich in plantations, was ravaged; while the Jews' quarter, which is extremely dirty, had few victims.—*Acad. de Méd.* Oct. 17, in *Union Médicale*, Oct. 19, 1848.

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

VOL. I. DECEMBER, 1848. No. XI.

I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

489.—*On the Intestinal Mucous Membrane.* By Dr HANDFIELD JONES.—The author directs attention to a layer of granular matter, enveloping nuclei, which lies immediately beneath the mucous membrane of the intestines, and in contact with the basement membrane. This granular layer or "*substratum*" of the mucous tissue, which is well seen in the colon, forms, together with the nuclei above mentioned, a great part of each villus, filling up the whole space between the limitary membrane, and the lacteal and capillary vessels. This substratum is the seat of the black discoloration, which is not uncommon in the intestinal mucous membrane; and is also the part principally affected in dysentery, in which it is often left bare by the disappearance of the mucous membrane, and is infiltrated by a plasma passing into imperfect cellular forms.

In the period of inactivity, the villi are semi-transparent; when absorption is going on, however, they are opaque from the presence of oily matter in the form of globules and granules of different sizes. The larger of these Dr Jones believes to correspond with the absorbing cells described by Professor Goodsir, as formed during the process of absorption, and which are very inconstant in their number and size, being sometimes entirely absent in villi which are manifestly in a state of activity. The opacity caused by the absorption of the chyle may be also observed frequently to pervade the whole length of the villus, thus indicating that this function is carried on in every part, although probably more active, as described by Mr Goodsir, at the summit. The active agents of absorption are believed by the author to be the nuclei distributed among the granular matter of the villus, and which, though obscured during the process by the presence of milky chyle, are constantly visible in the inactive and semi-transparent villus. "It is well known now, that the formation of perfect cells is by no means to be regarded as essential to the exercise of the energy of nuclei, those fundamental and efficient parts of almost all cell formations. It is also known that the formation of perfect cells indicates a certain degree of permanence in the structure so formed, and that their contents are destined to be retained for a period, to undergo some elaborating change, not to be immediately yielded up; while, on the other hand, the non-completion of cells indicates that the process is of a rapid character, and not intended to produce any considerable change in the material acted on. Remembering these facts (of the general truth of which there cannot be much doubt), it will be admitted, perhaps, as highly probable, that the nuclear corpuscles of the granular basis of the villi exert an attraction on the chyme by which they are surrounded, and draw it continually into the substance of the villus, from whence it is rapidly conveyed away by the efferent lacteal."

The author agrees with Professor Weber, that the shedding of their epithelium is not *necessary* to enable the villi to perform their functions. He has seen the villi clad with their epithelium when the lacteals were filled with chyle; nevertheless it is certainly common to find them divested of this covering when absorption is most actively present. Dr Jones corroborates the observation of M. Lacauchie, that the villi are subject to retraction and thickening, under the influence of circumstances which are not well understood, as they do not appear to be possessed of any contractile tissue as an element of their structure, and "the distension of their capillary plexus with blood would rather have a contrary effect." [We think, on the contrary, that this shortening and thickening of the villi is a very probable effect of vascular or any other distension.]

Dr Jones has examined with great care the solitary and aggregated glands of the intestine in the human subject, as well as in the rabbit and dog. The patches he considers, like most other anatomists, to be merely aggregations of solitary glands. The depressions in the aggregated glands do not correspond to any distinct open mouths of follicles, but seem to be produced by the absence of villi from those parts of the mucous surface. The structure of the solitary and aggregated glands is very similar; they are situated in the substratum, below the basement membrane, and covered by a plexus of capillary vessels. On making a vertical section of one of the solitary glands of the human intestine, it is seen by the microscope to consist of masses of nuclear granules, "which, for the most part, are solid, not including a distinct cavity, and not contained in any definite follicular envelope; they lie at various depths; the larger are in contact with the surface, the mucous membrane, with its rows of vertical follicles, having disappeared above them; the smaller lie unquestionably beneath the mucous surface, and, I feel quite assured, have no orifice of communication by which their contents might escape into the intestinal cavity; even pretty strong pressure does not evacuate the contents of the smaller masses, while it sometimes produces this effect on the larger, which more closely adjoin the surface. The form of these masses varies a good deal; often they are considerably flattened, usually, however, more or less globular—their upper portion being always convex, and tending to approach the surface; when it reaches this, the mass appears to become more or less completely evacuated, and a shallow depression may then result; this, however, is but rarely seen. In the cæcum of the dog, the solitary glands are more or less prominent on the surface, and exhibit a very distinct appearance of a central orifice. When macerated in acetic acid, they appear as circular spots about the size of a large pin's head, rather flattened, and with perfectly defined margins. In vertical sections through the central orifice the mucous membrane is seen to dip down, and become gradually thinner; sometimes it appears to be perforated at the bottom of the depression; at others is continued plainly across. The gland itself consists of a solid mass of nuclear corpuscles, with a little granular matter. It is contained in a kind of capsule, which seems to belong to the submucous tissue; at the bottom of the depression, the mass comes in contact with the thin mucous membrane, if it exists, or with the orifice, if it be absent; but can rarely be made to escape even by strong pressure. It does not appear that these glands can be regarded as true follicles; their capsule is not continuous with the basement membrane; their contents are not epithelial particles lining the wall, but a solid mass of nuclei; and, lastly, the existence of an orifice in them does not seem constant, whether evidence of it be sought for by minute examination, or by observing the effect of pressure upon their mass. In the rabbit the long and wide appendix cæci has its mucous lining greatly thickened by a layer of masses consisting of nuclear granules; these are of elongated conical form; their apices reach to the surface, and lie in fossulæ formed by septal folds of mucous membrane; over their surface a capillary plexus is spread, supplied by the long vessels which run up from below; they appear to be quite solid, and their apex is certainly not perforated, but in some instances appears to be invested by a distinct homogeneous membrane. In all these cases, it is worthy of remark that the masses of nuclear granules are effected in a peculiar manner by acetic acid; instead of rendering them transparent, it makes them much more opaque, so that their outlines become extremely distinct even to the naked eye. This circumstance, as well as the marked difference between their contents, and the epithelium of any glands or follicles, is very characteristic of them, and tends to prove that they are not mere follicular involutions of the mucous surface, but superadded structures designed for some special but unknown function."

The aggregated and solitary glands would thus appear to be, according to Dr Jones' observations, an increased development in particular localities, of the nuclei and granular matter which he described as forming the general substratum of the mucous membrane. In the small intestine, where, he says, there are in health few or no *solitary* glands, such as exist in the colon, the bodies which in the diseased state are described as such are apparently adventitious structures, and are composed of nuclei and granules similar to those of the gland, but not inclosed in any capsule. The author believes these to be analogous to pimples of the skin, and, like them, capable of disappearing by absorption.—*Medical Gazette*, November 17, 1848.

490.—*Lymphatics of the Lungs.*—Dr Jarjavay describes these very minutely, dividing them into plexuses and vessels,

which are superficial and deep-seated. Some of the vessels have swellings in different parts which he calls varicose; and in other parts are simple, these he calls capillaries. The peculiar structure and distributions of these are very accurately described. It is worthy of remark, he says, that the black matter of the lungs has its seat in the track of the vessels of the varicose plexuses, and thus the pattern of these is mapped out by the black substance. His injections have failed to show how the lymphatics of the lungs come into connexion with those of the heart, and finally with the thoracic duct. He finds that, for the most part, ganglions seated about the root of the lungs receive the vessels, although he has noticed branches go directly to the thoracic duct, and in other cases join the diaphragmatic, œsophageal, &c. The ganglions about the left bronchus also receive the lymphatics of the part which reach them after following the curve of the aorta.—*Archives Gén de Méd.*, Jan. et Fev. 1847, *and Amer. Med. Assoc.*, 1848.

491.—*On the Independent Contractility of Muscular Fibre.* By Dr E. Harless. A new set of experiments performed on this subject, upon animals rendered completely insensible by ethereal inhalation, confirms the opinion that the irritability of muscle is a property inherent in the tissue itself, and not in any way derived from the nervous system. Dr Harless found that even when the nervous system had been rendered, by the action of ether, utterly incapable of conveying a galvanic stimulus, applied either to the nervous centres or the nerve-trunks, the same stimulus, applied directly to the muscles, would immediately throw them into powerful contraction.—*Brit. and For. Med.-Chir. Review*, July, 1848, from *Müller's Archiv*, 1847, No. 2.

492.—*On the Capillary Circulation.* By M. Bourgery.—In addition to the capillary or intermediary system of vessels at present admitted by anatomists, and which M. Bourgery considers as constituting a mere anastomosis between the arterial and venous radicles, unconnected with the vital changes going on in the tissues, the author describes a circulation of *capilliculi*, forming a diverticulum of the general circulation, and pervading more minutely than the capillaries the ultimate elements of every organ. These he looks upon as the proper and *special organic* circulation, by which in different organs the functional changes of secretion, nutrition, &c., are carried on. The *general* circulation in itself does not produce any functional changes, but merely preserves unbroken, and independent of the activity of the special circulation, the progressive movement of the blood, which at all times passes over in part from the arterial to the venous system, through the capillaries; while the *capilliculi* receive a part of it for elaboration in the special tissues to which they are destined. These capilliculi (the size is not stated) are impervious to all particles which are not in solution; the blood-corpuscles do not pass through them; nevertheless they may always be traced, varying in disposition according to the organ or tissue in which they are situated. For the most part they are tolerably uniform in size; but they may be observed, on the one hand, to pass into vessels still more minute (not equal to the half, third, or fourth part of the diameter of a blood-corpuscle); and, on the other, into the ultimate lymphatic vessels, which again communicate by innumerable minute passages with the venous system.

M. Bourgery conceives that this scheme of the circulation completes, without abrogating, that of Harvey and the majority of physiologists. On the one hand, it admits a general circulation of the kind described by Harvey, which is permanent and complete in the circle which it describes; in the other, it asserts an extension of this by an infinite number of partial or functional circulations, isolated from each other, but connected by means of the general circulation, and in their united capacity very much exceeding the latter. These partial circulations are special and heterogeneous in their function and distribution, and are only periodically active; the only exception to this being in the lung, where the special may be considered as subserving a mechanico-chemical function; and, being properly a function or complement of the general circulation, is, like it, permanent and complete.—*Comptes Rendus*, Sept. 4, 1848.

[We have endeavoured to express what appears to be the author's meaning, although the involved and inexact style in which the conclusions are given, renders it in some instances not a little difficult to be assured of having done so correctly. MM. Magendie, Flourens, Serres, and Milne-Edwards, have been appointed to examine into the author's facts. Should they find any reason to suppose these correct, we would suggest the question, how the change in the *colouring matter* of the blood, which apparently does not pass through this new system of vessels, is effected; and also, what are the forces which

determine the passage of the fluids through these vessels; as it can scarcely be supposed that the force of the heart, which is constantly exerted to maintain the general circulation through the very free *anastomosis* of the capillaries, should be the active agent of propulsion through this partial and occasionally active system of vessels.]

II.—PRACTICE OF PHYSIC.

493.—*Indian Treatment of Cholera.* By SAMUEL ROGERS.—The author insists on the importance of dividing the treatment into two stages: 1st, before the collapse; and, 2d, during the collapse.

1*st Stage.—Venesection* has been advocated by many, and very generally practised in this stage of the disease; but to be of service it should be performed early, before the heat of the body is much diminished, and the skin has become clammy. The blood at first flows with difficulty, is of a dark colour and thick, but in many cases, after a small quantity is drawn, it loses these characters, and becomes florid, the pulse rising in frequency; this I have repeatedly witnessed. Can this change be simply the effect of the abstraction of a few ounces, when the whole circulating fluid is dark alike? Is it not rather produced by the healthy organization of the blood being in some measure restored by the operation, the heart itself, relieved of its congestion, being enabled to act with greater vigour? The heart thus freed, by a portion of the vitiated blood being removed, receives a fresh impetus, and if stimulants are given at this time, they are enabled to produce their wonted effects, and the circulation becomes re-established. Bleeding should always be performed in the recumbent posture, as syncope is readily induced by the abstraction of a few ounces of blood in the upright position. The following description of its effects is given by a patient, himself a medical man. "There was a sensation which I am at a loss to describe, as if my heart was ceasing to beat, and a dread of suffocation; this sensation was instantly relieved by bleeding, and I recovered immediately."

Emetics are constantly given in the earlier stages, but their use appears to be based principally on theoretical grounds.

Calomel, in large doses, was long a favourite medicine with the older practitioners in India, from an idea that in such doses, in addition to its other effects, it possessed peculiar sedative powers; the usual routine having been to administer calomel ℈i, opii gr. ij immediately, on the patient being seen, and to repeat the dose every hour or two, according to the judgment of the prescriber. It is allowed by every one, that calomel possesses no specific power over the disease, and is useful when combined with opium, in restraining the violent action of the intestines, and allaying emesis; when the violence of the disease subsides, it then exerts its peculiar power in restoring diseased or suspended secretions. The experience of late years, however, has taught us, that the same effects may be produced when this medicine is given in much smaller quantities, whilst large doses are thought by many to hasten death in bad cases; and in those which recover, the salivation, which it often occasions, retards convalescence. Calomel in small doses is used by most practitioners, and the following formulæ are highly recommended:—calomel, pulv. capsici āā grs. iv, opii gr. iss or gr. ij, assafœtidæ gr. ij, ol. menth. pip. m. i, to be repeated at intervals whilst purging continues, until 8 or 10 grs. of opium have been taken. Dr Lorimer remarks, "I cannot forbear recording my testimony to a combination of medicines, which in warding off and checking an attack of cholera, in numerous instances, both in Europeans and natives, has been followed with the happiest results. The remedy consists of quinine, calomel, and opium, in the quantities of six, four, and two grains respectively, followed by a wine-glass of brandy diluted with a little warm water; this, given within the first hour or two of seizure, will be found in a large proportion of cases to check the disease, (in my own experience it has never failed.)"

The combination of nitro-muriatic acid and opium has been very extensively tried, and with the best results, the doses being, acid. nitric. m. ij, acid. hydrochlor. m. i, tinct. opii. m. x, water ℥ j, to be repeated every hour or hour and a half; the effects are sedative, stimulant, and astringent.

Sugar of lead and opium are acknowledged by most practitioners to be one of the best combinations which we possess, in arresting purging, in the premonitory stages of cholera, given in doses of grs. ij of the former, and opium gr. i, repeated according to circumstances.

Opium, in some shape or other, enters

into most prescriptions, and is of essential benefit in restraining the alvine discharges and stopping emesis; but from the tendency to coma and stupor, in this disease, great caution is necessary in its administration; 8 grs. of solid opium, is the largest quantity which I should consider it safe to use during an attack of cholera.

Stimulants are of great use in the incipient stages of cholera. Of these the spirit. ammon. aromat., the spiritus ætheris sulphurici, and sp. æth. nitrici. are the best, and the carbonate of ammonia and camphor, when we wish to administer stimulants in the solid form, for fear of inducing vomiting; quinine, from its influence over the nervous system, appears to possess a certain power in counteracting the effects of the poison, when given in the early stages. The Indian hemp has also been advantageously used for this purpose, with the effect of almost immediately raising the temperature of the skin.

2nd Stage.—If the means pointed out fail to arrest the disease in the first stage, little success can be expected from internal remedies when the collapse is fully developed. In the absence of any known antidote against the effects of the poison, our objects must be to endeavour to remove congestion, to arouse the sluggish circulation, and to support the strength until the state of collapse has passed away; to relieve the cramps; and to allay as far as possible the urgent thirst. As before remarked, when the powers of absorption are lost, it is worse than useless to pour quantities of medicine into the stomach. Cold diluent drinks, such as lemonade, effervescing draughts of carbonate of soda, and ammonia, and citric or tartaric acid, and soda water or weak nitric acid drink mixed with thin arrow-root, to which may be added a little brandy, are always most grateful to the patient in assuaging thirst; bitter beer and champagne are also very much relished, and are often retained when the stomach rejects every thing else. During the existence of complete collapse stimulants are worse than useless, external applications and enemata being the chief remedies which are beneficial at this period.

To relieve cramps.—Frictions with various stimulating embrocations have been recommended, but the annoyance which they cause to the patient is quite sufficient to counterbalance the good produced by them. The application of flannel bandages has been found more efficacious for this end, than any other mode of treatment. The following method has also been used:—"When spasms are severe in the extremities, the nitric acid applied gently with a feather acts like a charm, and very seldom requires two applications; it should be applied with a very gentle and steady hand, from back to front of the leg. The only objection I have to it is, that when not gently or properly applied, it is liable to cause sloughing and deep ulcerations, which take a long time to heal; but after all it is a satisfaction to possess a remedy capable of relieving the excruciating pain of spasms." Bags of warm sand applied to the feet, are of service in preserving the heat of the body; frictions of flour or hot ashes over the extremities are also favourite remedies with the natives of India, and are certainly useful in absorbing perspiration and preventing evaporation.

Cold Baths.—The cold *douche* as a remedial agent is highly recommended, not only in the invasive period, but also in the last stages of disease. I have known the most marked benefit obtained from dashing cold water on the face and head, when the patients were sinking into collapse, and when, except the head, the body was all over cold, and the pulse almost imperceptible; the patients in these cases often expressed themselves revived, and called for its repetition.

The use of hot baths is now relinquished by universal consent, having been found from experience to be injurious in various ways, but chiefly, from the fatigue and upright posture, inducing fatal syncope.

Saline injections into the veins.—The immediate, or primary effect, of this remedy was to restore the enfeebled circulation; the action of the heart and arteries being invigorated, and the pulse (which may have previously been imperceptible at the wrist) becoming strong and full. The temperature of the skin also, from being cold and clammy, became warm, and the patient aroused from a state of almost inanimate collapse, sat up, talked, and expressed himself relieved. This improvement was, however, found to be transitory; symptoms of collapse soon began to return again, the patient became covered with profuse cold sweat, and after relapsing into a state of extreme prostration, the vital powers could not be again stimulated to action.

Oxygen gas.—Oxygen gas has been used in the low stages of cholera, with the effect of immediately restoring the heat of the skin and raising the pulse; the inhalation being continued for four or five hours at intervals, whenever the pulse began to flag.

In favourable cases, when the skin has regained its natural heat, and the pulse has improved in strength, if the bowels are not naturally moved, the administra-

tion of aperient medicine becomes requisite; small doses of castor oil and laudanum, or aloes and calomel, āā gr. ij, to be repeated every three hours, are excellent medicines, producing feculent motions without purging. But great caution is necessary in prescribing purgatives, for frequently, after partial reaction has taken place, bile has reappeared in the stools, and the pulse has become perceptible at the wrist, the action of a dose of pulv. jalap. com., or of colocynth, has been known to produce sudden and fatal relapse. In secondary fever, the treatment must be regulated on general principles, bleeding either local or general, blisters to the nucha, cold lotions to the head, purgatives and mercury, being occasionally requisite to subdue congestion occurring in important organs.—*Reports on Cholera*, Madras, 1848.

494.—*Clinical Observations upon Anæsthesia.* By Dr BEAU.—The object of this paper is to exhibit the fact, that in certain forms of disease a condition of anæsthesia is present, which has hitherto for the most part escaped attention.

1. *Saturnine Intoxication.* Writers treating upon the deleterious influence exerted by lead upon the system, have noted anæsthesia as an occasional and rare occurrence in individuals who have been long exposed to its operation; and M. Tanquerel states that of 2160 persons suffering under various effects of lead disease, only eleven offered symptoms of deficiency of general sensibility. Nevertheless, anæsthesia is an habitual, if not an essential symptom of impregnation of the system by this metal. M. Beau's attention was at first accidentally directed to the subject, on observing an insensibility to feeling and to pain in the thigh of a painter, and an insensibility to pain in other parts of his body. Trying the experiments upon other individuals similarly circumstanced, he found the same result,—pricking, pinching, &c., the surface exciting no sense of pain; and he has now investigated the fact in thirty cases, some being very slight examples of colic, &c., and others of very short duration.

In these cases there are, however, *two varieties* of anæsthesia, viz. insensibility to touch, and insensibility to pain, better termed *analgesia*. The first of these is by far the least common, having been met with in only four of the cases. It is, too, usually partial, extending only over a small portion of the surface; but it announces a far more serious lesion than analgesia. This last is *constantly* found in persons suffering from lead poisoning in any of its degrees. We must, however, not content ourselves with asking the patient whether he feels, but confine our question to the sensation of *pain*. Parts which are thus insensible to pain are so also to *tickling*. This form of anæsthesia may affect the entire surface, being, however, most remarkable in the extremities, and especially the upper ones. It may extend even to the mucous membranes, and especially those which are normally endowed with great sensibility—as the uvula, isthmus faucium, nares, or conjunctiva—any of which parts may be tickled without the usual consequences, the patient being still quite conscious of the mere contact. The anæsthesia disappears as the cachectic colour is removed, and the appetite restored; with a slowness proportionate to the age of the patient, or to the severity of his disease. It has disappeared as soon as the sixth day after treatment, and at other times not until the twelfth or fifteenth. With this anæsthesia to excited pain, violent pain of a spontaneous character, as colics, &c., may exist.

2. *Hysteria.* M. Gendrin, in 1846, first stated anæsthesia to be a constant symptom in this disease; but he did not distinguish between insensibility to pain and insensibility to touch, the latter being very rare, and only observed in very bad cases.

3. *Hypochondriasis.* Anæsthesia is to be observed also in this disease when well marked and of long standing. Besides the diseases mentioned, it will probably be found in *scorbutus* and *pellagra* (both of which not infrequently terminate in paralysis), and in various other forms of colic besides that from lead. The *nervous delirium* of Dupuytren following traumatic affections is attended with this anæsthesia, and the insensibility to surgical operations manifested by some of the insane may be similarly explained; and these views throw some light upon the ease with which religious fanatics have at different periods apparently borne the most horrible sufferings.

The above pathological considerations lead to the physiological separation of the sense of touch and of pain; and this is susceptible of proof by experiment, for after a blow, cut, &c., the pain is distinctly posterior to the perception of the injuring body. "The sense of pain may, so to speak, be considered as annexed to that of touch, and thus is the first to disappear when the innervation does not possess its normal intensity. If the innervation is subjected to still further diminution, then the sense of touch disappears in its turn, and the insensibility is complete. The object of the sensation of touch is to in-

form us of the presence of bodies in general, while that of pain has the no less important office of advertising us of the contact of disorganizing bodies." We may then say that there is a paralysis of the sense of pain, just as of the sense of touch, of the special senses, or of the motor powers.—*Archives Générales*, tom. xvi. pp. 5-24.

Since publishing the above communication, M. Beau has found that *typhoid fever* may be added to the diseases accompanied with anæsthesia, which persists even during convalescence.

He has also remarked that *analgesia* in the various cases is more observable in the erect than in the recumbent posture, after exertion, *e. g.* mounting stairs, and indeed after any action, whether physical or moral, which produces a temporary diminution of strength.—*Gaz. des Hôp.* 1848, No. 26; *and British and Foreign Medical-Chirurgical Review*, Oct. 1848.

495.—*A New Diagnostic Sign of Intermittent Fever.*—This sign, pointed out by M. R. Vanoya, consists in a peculiar condition of the mucous lining of the lower lid. In a healthy subject this surface presents a more or less vivid red colour; but when intermittent fever has lasted some time in any subject, another appearance is observed, constituted by a pale crescentic line, the extremities of which correspond to the canthi of the eye, and its concave edge embracing the sclerotica: it is visible on lowering the lid and directing the subject to look upwards. This appearance is dispelled by the internal administration of febrifuge medicines, and persists so long as the patient is exposed to a relapse.—*Annals de la Société Med. de la Flandre occ.*

III.—PRACTICE OF SURGERY.

496.—*Treatment of Aneurism by Compression in America.* Five cases of Aneurism have been treated in this way, in the practice of Drs Buck, Rodgers, and Watson, of New York, Knight of New Haven, and Mutter of Philadelphia.

The first case was one of femoral aneurism, in which pressure was fairly tried and did not succeed, and it became necessary at last to resort to the operation by ligature.

The instance which occurred to Dr Rodgers was that of a negro seaman, aged 47, who, two months before, observed a swelling in the popliteal region, which arose after a fall. The tumour was of the size of a duck's egg, and the symptoms of aneurism were well marked. He entered the New York Hospital, and on the 15th of January 1847, pressure was made upon the artery near the groin by means of an arterial compressor. This was continued till the 12th of February, but it being found impossible to effect the desired object with it, Dr Rodgers substituted another, consisting essentially of a metallic plate placed upon the inner side of the thigh over the vessel, having three holes at short intervals through which screws passed, each having at one of their extremities a firm pad, and at the other a projection to which a key was adapted, by means of which pressure could be made upon the femoral artery at the different points. This metallic plate was secured over the artery by means of broad straps attached to a sliding plate of steel, secured in a metallic bar, applied longitudinally to the back of the limb.

Soon after the adjustment of this instrument, it was ascertained that the patient loosened the screw in the absence of his attendant. He was now watched night and day for three days, by the end of which time all pulsation in the tumour was entirely arrested. The swelling gradually subsided to half its original size. The only inconvenience experienced by the patient was a numbness of the limb, upon the first removal of the instrument, but this soon left him, and he was discharged cured on the 13th of April.

The case of Dr Watson was one of femoral aneurism, treated also at the New York Hospital. The subject of it was an intemperate Irish woman, aged 38. The tumour, which was hard and painful to the touch, had existed for a month, and extended from the upper and inner third of the thigh to within a finger's breadth of the internal condyle of the femur, and at the point of its greatest circumference, reached from the inner border of the rectus muscle to the middle of the outer side of the thigh.

At mid-day, on the 23d of September 1847, pressure was made by means of two pads secured to circular straps over the artery, with counter-compresses on the outer side of the thigh, the pressure produced being regulated by a screw which acted directly upon the pads over the vessel. The first compress was fastened over the artery just as it emerges from

beneath Poupart's ligament, the second, a short distance below it, and both were so arranged as partially to control the circulation in the tumour, the pressure being regulated by alternately tightening one compress and slackening the other, in order to prevent abrasion of the integument. On the 24th the patient was restless; on the 25th she complained greatly of cramp and pain in the leg, which was much swollen, to relieve which a roller was applied and the limb elevated on a pillow.

By the 26th all pulsation had left the tumour. The upper compress was now removed—sixty-eight hours having elapsed from its first application, and very slight pressure was kept up by means of the lower one. No return of pulsation followed the removal of the compress, and in an hour afterwards the lower pad was also taken away. The skin beneath the upper compress had become somewhat abraded by the pressure, which required the application of a poultice, and subsequently simple dressings for a few days.

On the 28th no pulsation could be detected in the tumour, or in the femoral artery below the point, upon which the upper pad had rested.

By the 28th of October the tumour had much diminished in size, and become softer.

On the 12th of November, nearly two months subsequent to the commencement of the treatment, she left the hospital well, the tumour still gradually becoming smaller. There was no pulsation to be detected in the anterior or posterior tibial arteries, or at any point below the giving off of the profunda, and the femoral artery itself below that point was felt like a solid cord beneath the integument.

The case furnished by Dr Mutter, was that of a book-keeper, aged 41, whose general health was feeble, and who, six weeks previous to the 24th of September 1847, had been seized with stiffness in the right ham, which was soon followed by a pulsating tumour of the size of a turkey's egg. After a few days' rest in the horizontal position, his treatment was commenced by applying a roller to the limb in order to prevent swelling, and the application of one of Charrière's compressors, with a small oval pad over the femoral vessel where it passes down to become popliteal, and another similar compressor with a larger pad over the artery at the upper third of the thigh. The limb was then placed upon an inclined plane. After remaining in this position for twelve hours, the lower compressor was tightened until all pulsation ceased in the tumour. The pain produced by this procedure was severe, and could only be borne at first for half an hour. When it became insupportable, the upper compressor was screwed down, and the pressure from the lower one removed. The patient supported the pressure above for two hours without much difficulty; it then became annoying, and, in order to relieve the suffering, the lower compressor was again tightened.

By thus alternating the points to which it was applied, the necessary amount of pressure was kept up without excoriation, or any other injurious consequence resulting, and from the peculiar construction of the instruments, and the previous application of the roller, the swelling of the limb was trifling. During the treatment, the diet of the patient was restricted, and digitalis was administered to him.

By the 12th day the tumour was reduced to about half its original size; had become solid, and was free from pulsation. Notwithstanding these circumstances, Dr Mutter did not consider it safe to allow his patient to move about, or even to relax the treatment, but continued to pursue the same course, with slight modifications, for six weeks longer. At the expiration of this period, the tumour had nearly disappeared, the collateral circulation was fully established, and the disease radically cured.

Dr Knight's case, which is peculiarly interesting, from the novel manner in which the pressure was made, and quickly effected a cure, was that of a mulatto man, aged forty-eight, in whom a popliteal aneurism had existed for several months. The aneurismal tumour, which was well marked, filled up the whole popliteal space. The leg was very painful and œdematous. After the œdema was removed by rest, and other appropriate treatment, pressure on the artery, by means of the hoop tourniquet, the calliper-shaped instrument, the common tourniquet, guarding the limb against pressure of the strap by encasing it with thick sole-leather, and by a variety of other mechanical contrivances, was fairly tried. By whatever instrument, however, the pressure was made, and however carefully it was guarded, whether continued on one point only, or shifted from one part of the artery to another, the pain became in a short time so severe that it could not be endured. The pain complained of was not in the part pressed upon by the instruments, but was felt equally in the thigh and below the knee, and occurred whether the limb was left uncovered or was enveloped in a roller. It usually began in twenty-five or thirty minutes after the pressure was made, and

became intolerable in fifteen or twenty minutes longer, and could be continued in no instance beyond one hour. These efforts were persisted in for eight or ten days, and as nothing had been gained at the end of that time, were abandoned. Before resorting, says Dr Knight, to the ligature of the artery, I concluded, with the concurrence of his physician, Dr Tyler, to try manual pressure upon the vessel. "To accomplish this, a sufficient number of assistants were procured from the members of the medical class, who cheerfully offered their services. They were divided into relays, two keeping up the pressure for five or six hours, relieving each other every hour or half hour, and these succeeded by two others. Sufficient pressure to arrest the pulsation in the tumour was found to be most easily made with the thumb or fingers, without a compress, upon the artery as it passes over the os pubis, and the direction given to the assistants was to keep up this amount of pressure as nearly continuously as possible." This treatment was commenced at three o'clock p. m. No pain of consequence was produced by it for five or six hours, and then it was not severe, and was quieted by the eighth of a grain of morphia once or twice repeated. About eight hours after the pressure was applied, the temperature of the limb was diminished, and it appeared shrunken in size. Upon removing the pressure from the artery at eleven o'clock of the following day—twenty hours from the commencement of the treatment, the tumour was found to have diminished very little, if at all, and pulsated as strongly as before; but the tibial arteries could not be felt. The treatment was continued. Upon examining the parts the next morning, forty hours after the treatment was begun, the tumour was found to be nearly one-third less in size, firm and unyielding on pressure, and entirely without pulsation. All treatment was then discontinued. The femoral artery pulsated with its usual strength in the groin, and distinctly as far as its passage through the tendon of the adductor muscles. Between this point and the tumour it could not be felt. Several of the anastomosing arteries, especially one upon the inside of the limb, could be distinctly traced passing over the knee, pulsating strongly, and enlarged in size. From that time to the present—a period of more than four months—no change has taken place in the limb, except that the tumour has gradually diminished, so as now to be scarcely discoverable, and that the leg, which was at first cold and weak, has nearly regained its natural temperature and strength.—*Transactions of American Med. Assoc.*, 1848.

In addition to these cases, the following remarkable case is reported in the New York Journal of Medicine for July 1848. The subject of the case was a coloured man aged between fifty and sixty, in whom Dr Hosack tied the femoral artery at the lower part of the upper third of the thigh for popliteal aneurism, about the size of a small goose-egg. Upon securing the artery in the ligature, all pulsation in the tumour ceased; the wound being dressed in the ordinary way, healed kindly in the usual time, casting off the ligature on the 26th day; after which the swelling continuing gradually to decline, left the patient to all appearance perfectly well, with the exception of a slight halt in his gait, which entirely disappeared after a few weeks. About the middle of the following August he returned to Dr H. with the tumour of nearly the size it was at the time of the operation, but it had not the same elasticity, and was more solid to the feel. Pulsation was distinctly to be perceived in the tumour, and could be detected in the femoral artery quite up to the point at which the ligature had been applied, as well as in the tibial branches, but with diminished force. Under these circumstances, Dr H. determined to make trial of compression. Preparatory to the application of the instrument the patient was directed to remain quietly in bed for three or four days, which being complied with, the instrument was adjusted, and pressure exerted upon the femoral artery, so as to arrest completely all pulsation in the tumour; after an hour or more, it became necessary, in consequence of pain produced by pressure, to shift the pad an inch or more from the point just compressed, and so changed from time to time, as circumstances required; but having one plate or pad instead of three, (the other two being an addition of Dr Rodgers, which certainly is an improvement.) Dr H. was compelled to make compression upon the artery as it passes over the pubis, while changing the position of the pad. The instrument was thus continued until after the fifth day, when finding no pulsation in the tumour, it was removed. After a lapse of a fortnight or more, a slight thrill was to be detected in the aneurismal sac, when the instrument was re-applied for thirty-six hours longer, varying the pressure on the artery as circumstances required. Pulsation or thrill being no longer discoverable in the tu-

mour, which had now become more solid, compression was taken off; since which time the patient has been able to take exercise, and attend to his usual occupation, being perfectly restored to health.—*American Journal of Medicine*, October 1848.

497.—*Removal of a Carious Portion of a Rib.* By Dr AUDOARDO LINOLI.—Towards the end of 1845, a girl, three years of age, was attacked by pleurisy of the left side. After several weeks a tumour appeared beneath the left breast, and in proportion as it increased in size, there was an improvement in the respiration. An opening having been made into the tumour, a large quantity of sero-purulent matter was discharged; after two weeks, this opening was permitted to close up, when another tumour appeared, and required to be treated in the same manner. Some time afterwards the cicatrix of the first wound opened, and continued to discharge purulent matter. Various attempts to cure it by means of caustic, &c., were made, but without success; when the patient having been brought to Dr Linoli, he discovered numerous fistulous openings penetrating into the thoracic cavity, arising from caries of the sixth rib. In these circumstances, Dr Linoli proposed the removal of the diseased bone. The operation was accordingly performed, and the edges of the wound having been carefully brought together, in five days were found to be united in almost their entire extent. In six weeks the cure was quite completed, and the child's health re-established.—*Annali Universali di Medicina*, March 1848.

498.—*Description of a Truss to be worn in Cases of Congenital Hernia.* By WILLIAM COATES, M.R.C.S.—Mr Coates has been led to make use of the following simple contrivance, from having experienced the usual difficulties in the management of hernia in very young children from the want of tact in nurses—the impatience of restraint—the necessity of removing the truss during washing and dressing, when the infant usually cries, and from the expense of a constant supply of new trusses.

It consists of a skein of lamb's wool, for infants Berlin wool is preferable. This encircles the pelvis; one end is passed through the other at a point corresponding with the inguinal ring; the free end is carried between the thighs, and is fastened behind to that portion which forms the cincture. Being worn during the morning and evening ablutions, and then changed for a dry one, no attention is required on the part of the nurse, except at the moment of changing.

Mr Coates states that he has given this truss extensive trials, and that the result has uniformly been the radical cure of the disease. With ordinary care in drying, and the occasional application of magnesia, or other nursery powders, he has never found the skin injured.—*Medical Gazette*, September 1848.

499.—*Case of Hæmatocele of the Scrotum and Cord produced by a slight Exertion.* By M. GOUGEON.—D., aged fifty-four, was admitted into the Hôpital Saint-Louis, under M. Malgaigne, 11th May 1848. Seven years before admission, a few days after a fall upon his back, he perceived a tumour on the right side of the scrotum, about the size of a nut, which continued to increase for four years, having then attained the size of a goose's egg. May 10th, while in the act of stooping, he experienced the sensation of something giving way at the part, after which the penis and scrotum became much swollen, and of a dark red colour. On admission, the scrotum on its right side presented a large soft tumour of a bluish colour, streaked with veins much dilated, and it was only at the base, and to the inner side, that pressure caused a pain similar to that occasioned by pressure of the testicle. The patient being kept in bed, the parts were supported, and emollient poultices applied. On the 16th, the tumour was diminished in size, and of a firmer consistence. M. Malgaigne, being of opinion that there was a collection of fluid in the tunica vaginalis, introduced a trocar, and removed some dark sanguineous fluid. The tunica vaginalis being thus emptied, another tumour higher up was discovered. The poultices were re-applied, but in a few days the inferior tumour had regained its former size. Lotions containing iodine were now used, but without effect, after which compression, by means of adhesive straps, was employed, and produced a very considerable diminution of the tumour, but on the 23d June the patient left the hospital before the cure had been completed.—*Révue Médico-Chirurgicale de Paris*, Septembre 1848.

IV.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

500.—*Progress of Anæsthetic Midwifery in America.*—[We have much pleasure in laying before our readers the following abstract of the report of the committee on Obstetrics of the American Medical Association. Coming from the country where the great and original discovery of the practice of anæsthesia was made, it carries with it no ordinary interest; and we shall find that our transatlantic brethren have not been slow to undertake the extension of anæsthetic practice to the art of midwifery, notwithstanding the opposition of some of the most eminent members of the obstetric department of the profession in America.

Before noticing the report, we would wish to make a single observation; namely, that the honour of originating the idea of rendering labour painless, and of the bold introduction of anæsthesia into the actual practice of midwifery, belongs entirely and undeniably to Scotland; and we make this remark, because the opening paragraph of the report seems to imply, that "the merit, whatever it be, of the discovery and introduction into (obstetric) practice of this potent remedial agent, belongs exclusively and undeniably" to America, as does that of originating the practice of anæsthetic surgery.]

"In discussing" says the committee, "the propriety of the administration of anæsthetic agents in the practice of midwifery, we are met at the very threshold by the objection, that labour is a physiological, a natural process—that it is a law of nature, a part of the primeval curse, that pain should be endured in completing this process, and that, *therefore*, we are precluded from interfering in ordinary cases by any attempts to alleviate the sufferings of parturition. Your committee attach so little importance to this objection—they think it is founded on so narrow a view of the duties of our profession, that they should have passed it by as not meriting consideration or reply if it had not been seriously urged, as they understand by physicians in this country, whose opinions they are bound to respect. But it seems to us that a moment's consideration is sufficient to demonstrate its utter absurdity and futility: for the same line of argument, if carried out to its legitimate results, would preclude the use of ANY artificial assistance whatever, in cases of natural labour. We could not bleed a patient, or give a grain of tartar emetic, or use the extract of belladonna, to promote relaxation. We could not, upon this principle, even prescribe a dose of ergot or of borax, to increase the expulsive power of the uterus. No! our duties, in affording relief to the sufferings and trials of humanity, are not to be bounded by such contracted and unfounded notions as these. Wherever there is pain to be endured, or distress to be encountered, there should we be to administer the remedy, if it can be found, and can be administered safely."

"*Safety*, as applied to remedial agents, is a relative term. Very few articles in our materia medica are absolutely safe, if prescribed for all patients and in any quantities; while many of them are safe only when given with the utmost caution, and in the most minute doses. Strychnine, morphine, Prussic acid, aconitine, are familiar examples of this truth. But this extreme minuteness of dose, and the care with which the remedy must be adapted to the case, are not considered as valid objections to the use of these articles, and they are accordingly prescribed daily, by our most cautious and judicious practitioners. If, therefore, the quantity in which chloroform can be given with safety, and at the same time with efficiency, can be ascertained, and if we can also point out the peculiarities of condition or constitution, if any, which forbid its employment, we shall then have brought it within the rule which regulates the use of all the more potent articles of the materia medica, with this additional advantage and safeguard, that from its mode of administration, there is not as much danger of its being given in over-doses, and it can, of course, never be given by *mistake*, an accident which has so often happened with fatal results with other articles."

"The anæsthetic agents, ether and chloroform, have now been used in perhaps 2000 cases of midwifery, and so far as the committee have been able to learn, without a single fatal, and very few, if any, untoward results. If reliance, therefore, is ever to be placed on human testimony, it would seem that enough had been adduced in their favour to render it proper for the profession to give them further trial, and by careful examination and faithful report of their effects, endeavour gradually and cautiously to establish general principles by which their administration may hereafter be directed. The committee, in a pretty extensive correspondence with physicians in various parts of the country, have found an entire unanimity of opinion among those who HAVE TRIED these agents, as to their favourable effects, both in ad-

vancing the progress of the labour, and in relieving the sufferings of the patient."

"In the majority, perhaps a very large majority of cases of natural labour, where every thing is advancing with regularity and reasonable rapidity to a favourable termination, and where the individual is not undergoing a great amount of suffering, the committee would recommend that etherization be not employed. With a great many females after the first labour, the sufferings of childbirth are not very severe, and, being also of short duration, it is obviously unnecessary to interfere by any artificial means—and if chloroform or ether be used at all on such occasions, they should be confined to the last stage, the exit of the child's head over the perineum."

"Etherization would seem to be peculiarly adapted to those tedious cases of labour, where the patient's sufferings, on account of their severity and great duration, become almost intolerable; where there is great nervous irritability, and where there may be great ultimate danger of exhaustion and even death, from the long-continued irritation. In these and similar cases, it is believed that chloroform may be administered in pretty full or very minute doses, at the option of the practitioner, with very great relief and entire safety to the patient. Many such cases have occurred in the hands of members of the committee and other accoucheurs, where six or eight (and even more) drachms of chloroform have been given, and etherization kept up for several hours, with no other than beneficial results in every respect. The parturient pains have not been diminished, either in force or frequency; relaxation has been promoted; pain and suffering lessened or entirely annulled; the placenta readily thrown off, and all the circumstances following the birth of the most favourable character."

"It has been objected, and with some reason, that etherization should not be resorted to in instrumental delivery, because, it is urged, the sense of feeling on the part of the woman is an important guide to the operator in the application and use of his instruments; that as he cannot, like the general surgeon, *see* how and where he is operating, there would be great danger of his doing irreparable mischief unless guided and restrained by the cries of his patient, when pain was unnecessarily inflicted. We are of opinion, that where the forceps or other instruments are intended to be used, etherization should be employed only to a partial extent, or with the utmost caution, unless (which is the better way) the instruments be adjusted *before* the ether be inhaled at all. This latter precaution is generally practicable, and as it is the *use*, not the *adjustment* of the forceps, which causes pain, it will generally accomplish all we desire. Many cases, however, are on record, where instruments have been used during a profound sleep, and yet without injury, and it is probable that a skilful and cautious accoucheur could generally effect his purpose with entire safety. In performing the operation of turning, etherization is of doubtful benefit. Further observations are necessary to enable us to decide whether the freedom from pain be not more than counterbalanced by the increased tonic contraction of the uterus, supposing this (a point perhaps not definitely settled) to be one of the ordinary effects of chloroform."

[The members of committee were Drs Harvey Lindsly, George C. M. Roberts, Joshua Riley, C. R. Gilman.]—*Transactions of the American Medical Association.* Vol. i. 1848, p. 225, &c.

501.—*Statistics of the Induction of Premature Labour.* Dr HOFFMAN.—Our author observes that, favourable as he is to this operation in appropriate cases, his present statistical investigations convince him that it is resorted to with unnecessary frequency. Thus, in the kingdom of Saxony, with only a million and a half inhabitants, it was resorted to 64 times in the year 1839 alone; and Dr Ramsbotham has employed it 72 times, which he thinks far too often for any single accoucheur to require its aid. He should bear in mind, however, that Dr Ramsbotham has one of the largest consultation practices in London. Dr Hoffman has collected 524 cases, and, as the references to all these are supplied, his paper is one of considerable bibliographical utility. Of these cases, 271 were due to German, 192 to English, and 17 to French practitioners; but when we find he only assigns 3 cases to Americans, we see how defective his researches in that quarter must have been.

The *age* of the mother is recorded in but 146 cases, the youngest being 17, and the eldest 44; in more than one half of the entire number she had reached or passed her 30th year. Of 258 cases, in only 49 was the operation resorted to in a *first pregnancy*. Although the *repetition* of the operation in the same woman must have been no infrequent occurrence, the author finds records of this only in 34 cases, in some of which it was performed three, four, or more times. The *stature* of the women is recorded to have been oftener small than large, as would be ex-

pected, from the greater frequency of small and rickety pelves in conjunction with the former. In comparatively few cases has the author found the *indications* for the operation furnished, but justly concludes that, in the bulk of cases, it has been instituted on account of narrow pelves. In only 68 cases does he find that *preparatory treament*—such as baths, tepid injections of the vagina, friction of the abdomen, &c.—have been put into force; an omission, he considers, much to be regretted.

In nearly two thirds of the cases, the *mode of operation* is given. Of the more generally admitted of these, the use of *secale cornutum* is recorded in 45 cases, almost entirely by English practitioners. In these, 23 children were born alive, 15 dead; and, of the whole 38 noted, 12 others died within 36 hours after birth. The *Hamiltonian* plan of detaching the membranes, modified by several Germans, is exceedingly tedious. The introduction of *prepared sponge* is a favourite mode with the Germans, and was employed in 70 cases. In 56 cases in which the condition of the child was noted, 42 were born living. *Puncturing the membranes* is the oldest mode, and has been resorted to in 180 cases, and, indeed, doubtless in many of the others not specified. It is beyond all others the easiest, quickest, and most certain means of inducing premature labour, but has been received with much more favour in England than in Germany. By it, however, a far less proportion of children are saved than by the use of the sponge. The fates of 178 are specified, of which 103 were born alive, 12 still-born, and 63 born dead.

As to the *presentation of the child*, it is specified in only 120 cases; and of these 45 were cephalic, 75 non-cephalic presentations. This proportion is, however, delusive; as it is nearly certain that all the cases not specified were natural presentations. Even allowing this, we still find every seventh case a preternatural one. In the 75 cases, the great number of 19 cross-births are noted. In 84 cases the completion of the labour required assistance; in 36 by the forceps, 18 by turning, and 11 by perforation.

The fate of the *child* is recorded in 373 cases, in which 250 were born living, or recovered from asphyxia, and 123 dead. But in 77 of these cases, the child died from circumstances which could have no reference to the operation, as faulty position, perforation, &c. Of 192 of the children born living, further reports state that 127 continued to live, and 65 had died—28 in the course of six hours, 6 in twenty-four hours, and the rest at periods varying from a day to a year or more.—*Neue Zeitschrift für Geburtskunde*, vol. xxiii. pp. 161-222, and 371-436, and *Brit. and For. Med.-Chir. Review*, Oct. 1848.

502.—*Case of Retention of a Fœtus in the Uterus for Eleven Years.* By Dr Vondorfer.—This woman was forty-nine years of age, and had already borne two children. She was busily threshing corn, when she was seized with violent pains in the back, resembling those of labour. After they had continued for two hours the waters broke, and were discharged. For fourteen days she lay almost entirely upon her knees and elbows. At the end of this time the pains had almost ceased, but still in lying on her back she kept the knees well drawn up. Three weeks afterwards she was seized with a flooding, which was easily stopped. After this, there was a constant fetid discharge from the vagina, which continued more or less for eleven years, and occasionally some fœtal bones were discharged with great pain. During most of this time the woman was able for her work, and in good health. At the end of eleven years she was again forced to betake herself to bed, and she died, after some time, with the symptoms of purulent infection. On dissection, the uterus was found adhering to the anterior wall of the abdomen, and it contained the remains of the putrefied fœtus, along with its numerous bones.—*Schmidt's Jahrbuecher*, Nov. 9, 1848.

503.—*Cauterization of Cancerous Degeneration of the Os Uteri by the Red-hot Iron.*—By M. Malgaigne and M. Jobert.—Several cases have been observed in M. Jobert's clinique where this practice, in cases where the cancerous disease had not far advanced, was attended with the most beneficial results. The progress of the disease has been stopped, and the painful feelings of the patient have been dispelled for a time. Other cases of a similar description, and with similar results, have been lately observed among the patients of M. Malgaigne.—*Gazette des Hôpitaux*, Oct. 1848.

504.—*Arthritis in connexion with Uterine Disease.* By M. Malgaigne.—Although it is extremely difficult, or altogether impossible, to explain theoretically the connexion between inflammation of the male urethra and inflammation in remote joints, yet nothing is better proved by observations than the fact of this connexion. So also arthritis, most frequently seated in

the knee, is a consequence or concomitant of disease of the uterus. Most authors have looked upon the occurrence of such disease, along with disease of the uterus, as a mere casualty, but M. Malgaigne believes otherwise. At the Hôpital St Louis he has observed two cases of this description, both of which recovered, after the ordinary treatment for rheumatic arthritis.—*Gaz. des Hôpitaux*, Octobre 14, 1848.

V.—MATERIA MEDICA AND THERAPEUTICS.

505.—*Local Application of Chloroform in Lumbago.* By M. MOREAU.—Three cases of this disease are detailed in which immediate and permanent relief was obtained by the application to the loins of a piece of lint on which some chloroform had been poured. Oil silk ought to be laid above the lint, to prevent the evaporation of the chloroform. In a few minutes the patient complains of a burning heat in the part, which becomes red, and occasionally vesicles are formed; at the same time the rheumatic pain disappears. The author thinks that the cure cannot be attributed solely to the counter-irritation, as in one of the cases recorded sinapisms had been previously employed, without success. He supposes the chloroform to reach by imbibition the cutaneous and superficial muscular nerves, on which it exerts its anæsthetic power.—*L'Union Méd.*, Oct. 21, 1848.

In a case of pelvic tumour, where the patient suffered from severe pains of the inferior extremities, probably in consequence of the nerves being compressed in traversing the pelvis, the usual means of affording relief having failed of success, M. Legroux determined to try the local application of chloroform. A sponge containing chloroform was placed in the foot of a large boot of wax-cloth, constructed for the purpose, so that the vapour only came into contact with the skin. A feeling of warmth, prickling, and numbness, was soon experienced. The application was continued for several hours; when complete, anæsthesia was established, and the neuralgic pains had entirely ceased. The absence of pain continued several days, and the same treatment was equally successful on its return.—*Ibid.*, Oct. 31, 1848.

506.—*Local Anæsthesia.* By M. JULES ROUX.—M. Roux recommends the application of liquid chloroform to the surface of a wound left after an operation, while the patient is still in a state of general anæsthesia, with the view of benumbing the cut extremities of the nerves. The local insensibility is maintained, according to M. Roux, for forty-eight hours (?) and the patient is thus exempted from pain, both during and after the operation.

A case of hydrocele is described, in which M. Roux injected four drachms of chloroform into the sac. Two drachms were allowed to remain. The case ran the ordinary course, a cure being obtained in 14 days.—*Gaz. des Hôp.*, Nov. 7, 1848.

[A few days ago we applied liquid chloroform to an ulcer on the leg of a female, which required cauterisation with the nitrate of silver. She appeared to suffer little pain from the chloroform, and certainly very much less than usual from the caustic. She refused to inhale the drug.]

507.—*Indian Hemp in Cholera.* By M. WILLEMIN.—Reasoning from its stimulant action on the nervous system, M. Moreau had already some months ago recommended a trial of Indian hemp in Asiatic cholera. The officer of health at Cairo, M. Willemin, administered it in ten cases. In four of these the patients were moribund. They all died; but in one individual the pulse, which had been for some time imperceptible, returned to the wrist after the exhibition of the drug. It was then given to three less severe cases: they all recovered. Lastly, it was again exhibited to three individuals whose state had become desperate, but in much larger doses than before. All recovered; and it is deserving of notice that one of the three was M. Willemin himself, whose life had been despaired of.—*L'Union Méd*, Oct. 19, 1848.

[The above evidence, although inadequate to establish the efficacy of Indian hemp in cholera, is sufficient to suggest its further trial. As a stimulant of the *nervous system* we may presume its utility; and, combined with the stimulants of the *vascular system* in ordinary use, it is worthy of experiment. In his work on plague, M. Aubert Roche expresses his firm belief of the value of the Cannabis Indica in that disease. Seven cures were obtained in eleven cases where the remedy was employed.—*De la Peste ou Typhus d'Orient*, 1840.]

508.—*Action of Calomel on the Liver.* By M. Michéa.—When calomel is administered in purgative doses, the stools become more liquid, and at the same time acquire a characteristic green colour. This green colour is usually, at least by English practitioners, held to indicate the presence of bile, and the experiments of our author tend to show that the opinion is well founded. Calomel stools have been analysed by Golding Bird (*Med. Gaz.*, Sept. 1845), who found only slight traces of bile; and by Siebert of Erlangen, who failed to obtain any indication of that secretion. Dr Bird concluded from his experiments, that the green colour is due to an altered condition of the colouring matter of the blood.

M. Michéa has examined the fæces under four different conditions :—

1. Fæces passed by a healthy individual, no drug having been administered.—In six specimens no bile was found.

2. Green stools rendered by individuals suffering from gastro-intestinal irritation, no drug having been administered.—The presence of bile was indicated in one only of three cases examined.

3. Calomel stools.—This drug was exhibited to eight individuals, and the alvine dejections presented a green colour in four. In these the presence of bile was readily demonstrated. These stools showed also the presence of a large quantity of albumen, which the author supposes to be derived from the bile.

4. Stools obtained by the exhibition of saline and other non-mercurial purgatives. —These never or very rarely present the green colour or the viscosity peculiar to calomel stools. Five specimens were examined; neither biliverdin nor albumen was found.

The author prefers the nitric acid as a test for bile. Added to an animal liquid containing this secretion, a characteristic reaction ensues: the fluid becomes first green, then bluish-violet, and finally assumes a red colour. These changes occur within the space of a few seconds.

From these experiments it may be concluded that calomel stools contain an excess of bile, as nitric acid reveals in them the existence of two principles of that secretion, biliverdin and albumen. — *L'Union Médicale*, Oct. 21 and 23, 1848.

509.—*Belladonna in the Nocturnal Incontinence of Urine in Children.* By M. Trousseau.—The author narrates the case of a girl, five years old, who, since her third year had been the victim of this obstinate complaint. No effort was neglected on the part of the parents to remove the habit; but all the means adopted—some of them sufficiently severe—were without effect. A pill, containing one centigramme of the powder and half a centigramme of the extract of belladonna, was ordered to be taken every night at bed-time. During the first week two nights were passed without accidents; and from that time, with two or three exceptions, the complaint entirely disappeared. The treatment was resumed from time to time for nearly a year. This is only one of several cases occurring, as well in his own practice as in that of M. Bretonneau, in which Professor Trousseau has observed marked benefit from the use of this drug.— *L'Union Méd.*, Oct. 14, 1848.

In a more recent number (Oct. 21) of the same journal, Dr Blache, physician to the Hôpital des Enfans, records two very obtinate cases of nocturnal incontinence of urine occurring in individuals, one fifteen and the other eighteen years of age, where mercurial and sulphurous baths, refrigerant and astringent applications, tonic and ferruginous medicines, tannin, ergot of rye, nux vomica, and all other means had failed. Ultimately belladonna was exhibited with complete success.

510.—*Application of Caustic Ammonia to the Velum Palati in obstinate Singultus.* By M. Rayer.—The marked success obtained by this application in the treatment of spasmodic asthma (see *Retrospect*, p. 20), led the author to its employment in two cases of very obstinate hiccough. The cure was immediate and permanent.—*Annales de Thérapeutique*, September 1848.

[We beg the reader who may be disposed to essay this remedy, to observe, that the ammonia is applied to the soft palate, and not to the back part of the throat. In either case considerable caution is requisite; but in the latter the danger of suffocation, from the action of the volatile alkali on the glottis, is decidedly greater.]

511.—*Ergot of Rye in Mydriasis.* By J. F. M'Evers, M.D.—In the London Medical Gazette of September 8, a correspondent notices the peculiar action of ergot of rye upon the iris, discovered by M. Comperat; he says that in excessive dilatation from the use of belladonna, powdered ergot of rye, taken like snuff, has the property of contracting the pupil. Dr M'Evers tried its effects on several persons, whose irides were strongly under the influence of belladonna, and in no case did the ergot cause any change when employed on the same day with the belladona, but in every

case, on the subsequent morning, whilst the pupils were still largely dilated, the ergot had a marked effect after a few minutes. Thinking with Comperat, that our knowledge of this property of the ergot may be taken advantage of when the pupil is preternaturally dilated from other causes, he tested its efficacy in the following case of mydriasis.

A man aged 50, had spent the greater part of his life in tropical climates, but returned home with a good constitution. On getting out of bed three weeks ago, he observed excessive lachrymation of the right eye, which has continued since, together with impaired vision. The eye is free from vascularity or pain of any kind, and looks healthy in all its parts, except the iris, which presents the appearance of a narrow ring, so largely is the pupil dilated; the iris is perfectly immoveable.

A few pinches of ergot contracted the pupil considerably in a few minutes, whilst a few additional pinches, taken on the following morning, reduced the pupil to its normal standard, the iris assuming the lively motions of healthy action; thus, in a day, completing, as far as the pupil is concerned, the cure of a disease which Demours, and other writers on ophthalmic surgery, tell us cannot be accomplished by a six months' treatment.—*Dub. Quart. Jour.* November, 1848.

512.—*Sulphate of Phyllerine.* By M. JACHELLI, of Ferrara.—This alkaloid has lately been added to the list of febrifuges: it is obtained from the well-kuown evergreen shrub *Phyllerea latifolia.* It was known, before the researches of Dr Jachelli, as a cooling astringent, but it is now found to possess the same active anti-periodic properties as others of its class, the ash, the olive, &c.

An extensive series of experiments have been made, since the year 1825, on the action of this alkaloid in agues, by Dr Jachelli. He has compared its operation with that of—1st, a powder of the young leaves and twigs, in doses of 30 grains during the intermission; 2ndly, a simple decoction of the plant, made by boiling one part of the plant to 60 of water, down to one-third, and given in large doses also during the intervals; 3rd, with a compound decoction formed by adding 30 minims of dilute sulphuric acid to the preceding. The sulphate, in doses of from 12 to 15 grains during the apyrexia, has evinced its superior activity over other preparations of the phyllerea. Thus of 20 patients treated with the sulphate, all were cured; of 13 to whom the powder was administered, 11 were cured; of 20 to whom the compound decoction was given, 14 were cured; of 16 who took the simple decoction, 7 were cured.—*Bullet. Gén. de Thér.* July 18, 1848; *and Med. Gaz.*

513.—*On Spongio-piline.* By W. T. KAY, surgeon, Royal Navy.—The spongiopiline is a fabric composed of sponge and wool felted together in three layers, and coated on one of its surfaces with caoutchouc, which renders it impermeable. It is of the greatest service as a cataplasm, fomentation, vehicle for lotions, and other topical applications, as liniments, &c.; or it forms a substitute for a blister or sinapism.

As a Cataplasm.—The required form and size being given, the edges are pared or bevelled off with a pair of scissors, so that the caoutchouc may come in contact with the surrounding skin, in order to prevent evaporation of the fluid employed; for, as it only forms the vehicle, we are enabled to employ the various cataplasms hitherto in use with much less expenditure of time and money, and increased cleanliness. Thus we may still use the

Cataplasma Aceti, by moistening the fabric with distilled vinegar.

Cataplasma Aluminis, by employing a strong or saturated solution of the salt, &c. &c.

As a Fomentation, by preparing it as recommended for a cataplasm: soaking it in hot water; then pressing out the superfluous fluid, and applying it as hot as possible to the affected part; taking care to replace the one in use, as soon as it becomes dry, by another hot one.

As a Vehicle for Lotions.—On account of the large quantity of fluid that it is capable of retaining without any fear of its escape, it is admirably adapted for the employment of lotions of zinc, alum, &c.

As a Vehicle for stimulating Liniments.—In every instance where I have tried this material, it has exceeded my most sanguine expectations, especially as a substitute for sinapisms, by employing the compound camphor liniment, hartshorn, or liquor of ammonia.

As a Blister.—Moistened with liquor of ammonia it will raise a blister in four minutes, being more efficacious than any preparation now in use; its stimulating action is immediate, and it exerts no injurious effect on the urinary organs, nor is it likely to cover more surface than designed by the medical man.—*Med. Times*, Nov. 4, 1848.

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END OF THE MONTHLY RETROSPECT FOR 1848.

MURRAY AND GIBB, PRINTERS, EDINBURGH.

MONTHLY JOURNAL

AND

RETROSPECT OF THE MEDICAL SCIENCES.

London Editor.

GEORGE E. DAY, M.D.,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, LONDON.

Edinburgh Editors.

ALEXANDER FLEMING, M.D. W. T. GAIRDNER, M.D.

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Guy's Hospital Reports.
Lancet.
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Medical Times.
Provincial Medical Journal.
Dublin Medical Press.
Chemical Gazette.
Journal of Public Health.
Pharmaceutical Journal.
Obstetric Record.

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Journal of Medical and Physical Science.

AMERICAN.
American Jour. of Med. Science.
New York Journal of Medicine.
Philadelphia Medical Examiner.
Charleston Medical Journal.

FRENCH.
Archives Gen. de Médecine.
Annales de Thérapeutique.
Annales d'Hygiene Publique.
Annales Med. Psychologiques.
Journal de Médecine.
Journal de Pharmacie.
Journal de Méd. et de Chirurgie.
Bulletin des Academies.
Gazette Médicale de Strasbourg.
Gazette Médicale de Paris.
Gazette Medico-Chirurgicale.
Gazette des Hôpitaux.
L'Union Médicale.

GERMAN.
Zeitschrift für rationelle Medizin.
Medicinische Annalen.
Medicinische Vierteljahrschrift.
Zeitschrift der K. K. Gesellschaft der Aerzte zu Wien.
Medicinische Jahrbücher der K. K. Österreichischen Staates.
Archiv. für Physiologische und Pathologische Chemie und Mikroscopie.
Journal für Kinderkrankheiten.
Präger Vierteljahrschrift für die Praktische Heilkunde.
Schmidt's Jahrbücher.
Zeitschrift für Augenheilkunde.
Pharmaceutisches Central-Blatt.
Wochenschrift für die Gesammte Heilkunde.
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OF THE

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MONTHLY RETROSPECT

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FOR 1848.

EDITED BY

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EDINBURGH: SUTHERLAND AND KNOX.

LONDON: JOHN CHURCHILL.

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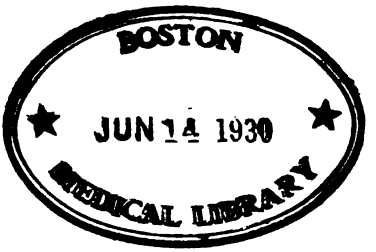
JANUARY TO DECEMBER,

1849.

EDINBURGH: SUTHERLAND & KNOX, GEORGE STREET.
LONDON: JOHN CHURCHILL, PRINCES STREET, SOHO.

MDCCCXLIX.



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BOSTON
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I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

1.—*On the Mechanism by which the Valves of the Heart are closed, and by which the Sounds of the Heart are produced.* By Dr Joseph Hamernik of Prague.—In this paper the author recapitulates at some length the opinions of Dr Baumgarten on the mechanism by which the valves are closed, which he considers of much importance, and with which he professes his concurrence.

The most important points in Dr Baumgarten's views, are, that during the systole of the auricles, there is either no regurgitation, or of a very trifling amount, from the auricles into the great venous trunks. This, he conceives, is prevented by a circular arrangement of muscular fibres, observed by anatomists to surround the orifices of the veins; by the blood being impelled in the direction of the auriculo-ventricular orifice, in consequence of the greater portion of the muscular fibres of the auricle being inserted into the tendinous border of these openings; and by the *vis a tergo* of the blood; and in the right side, by the valve at the mouth of the vena cava. This latter, however, Dr Hamernik considers to be inoperative in the adult, and only useful in the fœtus. He attaches great importance to the force of the current of blood flowing in the venous trunks, due to the alternate pressure exercised by the

respiratory movements, reflux being prevented during expiration by the valves in the veins at the base of the neck; and in the vena cava inferior, he attributes a valvular action to the displacement of the liver during expiration, which diminishes the calibre of the vein at its passage through the diaphragm. Dr Baumgarten considers the pulsatory movements observed in the healthy state of parts in the great veins, to depend on the sudden interruption of the current of blood during the auricular systole.

That the auriculo-ventricular valves are closed by the counter pressure of the ventricular blood, suddenly developed by the contraction of the *auricles*. That the cavities of the auricles and ventricles, during the heart's diastole, are distended by the continuous current from the veins; while at this period the valves are to be found floating in the blood in the form of a funnel. That the object of the auricular systole is to induce such an amount of tension in the contents of the ventricles, and of course in the blood surrounding the funnel-shaped arrangement of the valves, as to cause their rapid closure; and that in this way only can regurgitation be prevented. If the heart be removed from the body, and the auricles cut away (it is better, however, to operate with one only), the artery obstructed by ligature, or by filling it with wax, and the cavity of the ventricle filled with a saline solution, the valve is found lying in the position above described. If then a stream of water be directed upon the valve from the height of a foot, so as to imitate the sudden contraction of the auricle, the valve is seen to close with great rapidity. If, however, an attempt be made to imitate the ventricular systole, by squeezing the ventricle with the hand, a large portion of its contents regurgitates before closure is effected.

That the closure is not due to the operation of the musculi papillares, but that it is much facilitated by the small specific gravity of the valves, which enables them to float on the surface of the blood.

Dr Hamernik then proceeds to make some remarks, which he considers in part deducible from the preceding.

1. It is possible that there may occur one or more systoles of the ventricles, unpreceded by any auricular action, forming what is called the "rythmus intercurrens" of the heart's action. In chronic asthma and pneumonia, the blood, powerfully propelled by the expiratory movements, may distend the auricles to such an extent, that they are unable to contract on their contents. In which circumstances, two or more systoles of the ventricles are required before the auricles can unload themselves.

2. The division by the older anatomists of the ventricles into portio auricularis and portio arteriosa, is physiologically and pathologically significant. In the former, there is a current of blood until the closing of the auriculo-ventricular valves, continuous with that of the veins. In the latter, a current is established by the ventricular systole, continuous with that of the arteries. Where there is no motion of fluid, there can be no murmur; consequently simple roughness of the mitral valve by exudation, or otherwise, will not give rise to a murmur with the first sound unless the valve be also insufficient.

3. The mechanism by which the valves of the arteries are closed, is similar to that of the auriculo-ventricular valves. Immediately on the contraction of the vennicles, the pressure of the blood attained in the large arterial trunks, acting equally in all directions, effects the closure of the semilunar valves. Their complete closure occurs contemporaneously with the end of the ventricular systole. When the ventricular diastole begins, the arterial retraction commences, and the wave of reflux from the large arteries, falls upon the valves already closed, and thus is produced the clear second sound. There is no regurgitation, which would necessarily be the case to a certain extent were the valves shut only by the returning wave of blood.

4. The first sound of the heart is occasioned by the vibration of the tense auriculo-ventricular valves, acted on by the blood propelled against them during the systole of the ventricles, and the vibration of the chordæ tendineæ. In like manner, the second sound is produced by the impulse of the blood on the semi-lunar valves already shut, and not by their closure.

5. A double or even a treble sound is sometimes heard over the ventricles, which has been ascribed to various causes, but is probably due to a double vibration of the tense auriculo-ventricular valves—just as a sail struck by the wind may emit several sounds. The same explanation is given when the phenomenon occurs with the second sound.

In contraction of the mitral orifice, there is occasionally heard a peculiar sound termed *cliquetis métallique*, or "audible heart impulse," and of which different explanations have been offered. According to the author's experience, all true heart sounds are heard by mediate or immediate auscultation only. This sound, however, is heard at a distance from the chest, and is hence presumed by him to depend on

the motion imparted by the heart's systole to the surrounding elastic tissues.

5. Morbid conditions of the muscular structure of the heart, can have no effect in preventing closure of the valves.

6. As the small specific gravity of the valves is assumed to facilitate their closure, any thing which can render them specifically heavier, as fibrinous deposits, in the case of debilitated individuals whose blood is of low specific gravity, may be conjectured to interfere with their action. It is in such cases that the re-establishment of an improved condition of the blood removes the murmur, as in typhus fever, severe pneumonia, &c. On similar principles, the author adds, the bruits observed in chlorotic patients, may perhaps be explained.—*Prager Viertel-jahrschrift*, 1847, vol. xi.

[We witnessed the experiments referred to in this paper, when performed by Dr Hamernik, and have much pleasure in testifying to their accuracy. The experiment, by which it is shown that the auriculo-ventricular valve is closed before, and independently of the ventricular systole, is very easy of performance.

The valves, when cut out of the heart, are found to float readily on the surface of blood; and probably their specific lightness plays a part in the mechanism of their closure, at least in the human subject; at the same time, that it is far from being essential is indicated in prone animals, and in the case of a man standing on his head. The seat of chlorotic murmurs prevents our attributing them to the cause hinted at by the author.]

2.—*On the Changes which take place in the Lungs after Division of the Pneumogastric Nerves.* By Dr Schiff.—It is well known that after section of the vagus nerves in the neck of an animal, death frequently takes place at an interval of a few days. In these cases the lungs are found to have undergone alterations, characterised by congestion, and the effusion of a large quantity of frothy sanguinolent serum into the bronchi; which lesions have been ascribed by authors to the paralysis of the glottis consequent on the section of its nerve (the recurrent), which induces respiratory obstruction, either directly, or by permitting of the passage of food and other matters into the trachea. Dr Schiff has performed a variety of experiments which disprove these ideas. By cutting in some animals the recurrents, and in others the pulmonary branches of the vagus, he has convinced himself that the section of the latter causes congestion, with tumefaction of the bronchial mucous membrane; while that of the former only produces narrowing and paralysis of the glottis, without any pulmonary changes. The lesions of the lungs are likewise unaffected by the performance of tracheotomy, and by the section of the œsophagus in the neck (in dogs). He therefore concludes, that the state of the lungs is dependent on the integrity of the pulmonary portion only of the nerve. Section of the nerve on one side produced a slighter amount of pulmonary lesion, but never confined to the lung of one side; a circumstance which M. Schiff accounts for by considering the anastomoses in the pulmonary plexus of nerves.—*Archiv für Physiologische Heilkunde*, 1847; *Gazette Médicale*, 2d Dec. 1848.

[Dr J. Reid considers the congestion and bronchial effusion as a secondary effect of the diminished frequency of respiration in animals in which the vagi are divided.—(Ed. Med. and Surg. Journal, April 1839.) This idea agrees perfectly with the results of the above experiments; and is, we doubt not, quite correct.]

3.—*On the Chemical Changes of Respiration.* By MM. Regnault and Reiset.—A new and very extended series of experiments on this subject have been instituted by MM. Regnault and Reiset, who give minute details of the several steps of the process employed by them, the precautions taken, and the kind of apparatus used. Their investigations, which are still in progress, seemed to be performed with much care and exactness, and their results may probably be fully relied on. The most important of these results is, that nitrogen is invariably exhaled through the lungs, though the quantity is small, rarely exceeding $\frac{1}{100}$th of the amount of oxygen consumed. Hydrogen, and certain carburetted gases, usually present themselves in small quantity. As an illustration of the changes which Regnault and Reiset found to occur in the respired air, the following results of an experiment, in which a young dog was confined in the apparatus for twenty-four hours and a half, may be quoted:—

	Grammes.
Oxygen consumed - - - -	182·288
Carbonic acid produced - -	185·961
Oxygen contained in the carbonic acid - - - - - -	135·244
Nitrogen disengaged - - -	0·1820

If the quantity of oxygen consumed be represented at 100, then the results may be thus stated:—

Oxygen consumed - - - -	100
Oxygen in the carbonic acid -	74·191
Oxygen otherwise disposed of -	25·809
Nitrogen disengaged - - - -	0·0549
Average quantity of oxygen consumed in an hour - - -	7·44

These experiments rectify the erroneous results of Dulong and Despretz, who found that the quantity of nitrogen disengaged during respiration, was sometimes as great as one-fourth the quantity of oxygen absorbed.—*Comptes Rendus and Medical Gazette*, Oct. 15, 1848.

II.—PRACTICE OF PHYSIC.

4.—*On Scarlatina.* By J. W. TRIPE, M.D.—Dr Tripe defines scarlatina to be "a contagious eruptive fever, characterised by a uniform inflammatory action of the vessels of the skin, and of the mucous membranes of the alimentary canal, and of the urinary passages, which terminates in disquamation of their epithelium. it ordinarily attacks any one of these membranes but once during life."

After pointing out that this definition differs considerably from any other previously given, he proceeds to show that the membranes above enumerated are ordinarily attacked by the disease, and states his belief that such attack is necessary for the protection of the patient against a subsequent invasion of the malady.

The phenomena presented by the disorder during the epidemic of this year (1848), are next considered. The earliest symptoms consisted in diarrhœa or in vomiting, or in both; these were observed in every case in which severe inflammation and ulceration of the throat occurred. The eruption was frequently of a purplish tint, and severe cynanche existed in 44·4 per cent. of the whole number of cases. In all these latter cases a strong solution of the nitrate of silver (ʒj to ʒj aquæ) was freely employed, and with the greatest benefit. One case of very extensive inflammation of the parotids is mentioned, in which the novel treatment of opening the external jugular vein was adopted, and with marked relief.

Dr T. divides the cases in which coma and delirium occur, into two classes,—1st, in which they appear previously to the eruption; and, 2d, in which they supervene after it has come out. This latter form is subdivided into the inflammatory and the non-inflammatory. Cases are given in support of this division.

The alterations that occur in the urine during the progress of the disease are next considered. He observes that Dr Franz Simon, in his chemistry of man, was one of the first who investigated this point; and he gives several quotations from Dr Day's translations to show this. From his own observations he states, that the urine in scarlatina simplex is at first reduced in quantity, and subsequently contains albumen, a few mucus or pus and blood corpuscles, some other cells, and a smaller or larger quantity of disintegrated epithelium. In some cases the urine is but little altered. In scarlatina anginosa it contains a much larger quantity of albumen, of blood and mucus corpuscles, and occasionally triple phosphate. If the albumen does not disappear from the urine before or at the same period that the eruption leaves the skin, he considers that the convoluted tubes of the kidneys are either impacted with epithelium, or inflamed, the latter condition being recognised by the fibrinous casts of the renal tubules which are described by Simon. Dr Tripe doubts that these cylinders have any true envelope, and states that the cells contained in the amorphous mass are often much larger than they seemed to be at first sight, as the nuclei appear like cells, and are frequently described as such. In scarlatina maligna the urine is much altered, usually containing a large quantity of albumen, of blood and mucus corpuscles, mixed with fibrinous cylinders, and a large quantity of disintegrated epithelium. The greater the quantity of blood and albumen in the urine, the smaller is the chance of recovery.

Under the head of secondary affections, are classed affections which are said to constitute an integral part of the malady, viz., the inflammation of the mucous membrane of the fauces, pharynx, and other parts of the alimentary canal, and of the renal tubes. This inflammatory affection of these parts is considered to be necessary for the protection of the patient from a subsequent attack of scarlatina; and cases are related to show, that a person who is suffering from the cynanche without the eruption, may infect another with scarlatina. Three cases are thus stated,—"Mrs M. and her eldest daughter had scarlatina simplex of Bateman, some years since. Whilst the former was attending on her son, who died from scarlatina maligna, she felt very weak, languid, and feverish, with pains of her limbs and back. On the

third day she was attacked with severe cynanche, the tonsils ulcerated, and the fauces and pharynx assumed the appearance met with in S. anginosa. Date of attack, June 16th. On the 2d of July her eldest daughter (who had been brought home from the country contrary to my wish) was seized in a similar manner; the disease took the same course, and she recovered. Her sister, who had not had scarlatina, complained of the premonitory symptoms on the 11th. The eruption appeared on the third day, and was not attended with cynanche of the tonsils, but with sloughing of the mucous membrane of the posterior nares, fauces, &c. She died on the eighth day. Other similar cases which came under my notice, have irresistibly compelled me to believe that the cynanche forms an integral part of the disease, which, if once had, is not more likely to recur than the cuticular eruption. If, therefore, it is not had at the same time with the rush, the patient will be liable to its invasion in any future exposure to the infection."—Vol. 19, p. 6 and 7.

The changes which have been described as occurring in the urine, and some cases which are detailed, are adduced in proof of the assumption, that the kidneys are invariably more or less implicated by the disease. A case is related to show that dropsy may occur after exposure to the virus, in a patient who has had the rush and cynanche previously.

Dropsy.—There are three varieties. "1st, In which the urine is non-albuminous; 2d, In which the urine is albuminous, and the disease arises from a congested or subacute inflammatory state of the kidney; and, 3d, In which the urine is albuminous, but the kidney is in a state of acute inflammation. It had better, therefore, be divided into *A*, dropsy from debility; *B*, dropsy from renal derangement, (*a*); and disorganisation, (*b*)." This division is practically of great importance, as the former, *A*, is an innocuous disease; whilst the others, *B a*, and *B b*, especially the latter, are highly dangerous. The variety *B a*, consists essentially in derangement in the circulation, and in irritation or subacute inflammation of the secretory tubules of the kidney. The urine contains albumen, mucus and blood corpuscles, fibrinous cylinders, epithelial cells, large globular transparent nucleated cells, like the so-called parent cells of cancer, and a peculiar large yellow cell with indistinct nuclei, which occur sometimes singly, but more generally in rows, or in masses. These patients usually recover Variety *B b* is not readily distinguishable from the former (as both forms have a tendency to pass the one into the other.) except by the greater amount of febrile symptoms, and the greater quantity of the fibrinous cylinders of the yellow cells, and of the albumen and blood in the urine.

Dr Tripe next gives a brief *resumé* of the pathological changes that occur in the kidneys during the progress of the eruption, and of the inflammatory dropsy. He states that the increased nutrition of the cells lining the tubuli uriniferi, induced by the absorption of the septic poison of scarlatina into the blood, and its excretion by the agency of these cells, induces an increased rapidity in their desquamation, and a consequent blocking up of the renal tubes. After an attack of inflammation a variable number of the tubules are rendered useless; if the number be large, the patient will be likely to have a return of the dropsy; if the number be small, the recovery may be considered perfect. The seat of the disease in the kidney is pointed out, and the changes occurring in the progress of the disorganization are also indicated. The treatment of inflammatory dropsy should be at first antiphlogistic, followed by the exhibition of the tincture of the sesquichloride of iron, and of hydragogue purgatives. Diuretics are highly injurious, and must be strictly avoided, as they would only increase the already too rapid nutrition of the renal cells, and would thus increase the disorganization of the glands.

The question of the contagious character of the disease is next discussed, but need not detain us; suffice it to say, that the question is decided in favour of contagion. It is observed, however, that certain states of the system, of the atmosphere, &c., so modify the poison, "that the virus is only one agent out of several to which it is necessary to apply the term cause." The conditions necessary for the propagation of the disease are, "*A* (*a*), a state of the patient favourable for its reception, and (*b*), a certain degree of concentration of the virus. *B*, The conditions which modify the disease are, (*a*) the state of the system of the recipient, (*b*) the intensity of the virus, (*c*) certain general, and (*d*) local alterations in the atmosphere, (*e*) the age, and (*f*) the sex of the individual attacked." Each of these are subdivided; some into several subdivisions.

There is nothing to detain us in division *A*.

B a, *α*. A robust state of the individual attacked seems to predispose to active inflammation, and to inflammatory swelling and ulceration of the tonsils.

B a, *β*. Debilitated and badly fed per-

sons are more subject than the robust to sloughing of the mucous membrane of the fauces, and to considerable changes in the kidney; to abscesses in various parts of the body, and in the joints; and to the uncomplicated malignant form in which the patients die from the sedative effect of the virus on the nutritive functions.

B α, γ. Any causes that depress the powers of the patient may exert an unfavourable influence on the progress of the malady.

B α, δ. The occurrence of scarlatina in pregnant women is ordinarily fatal.

B α, ε. Organic disease of the kidney exercises an unfavourable power over the disease, as the kidneys are the organs which take a prominent part in excreting the poison from the system.

B α, ζ. Secondary attacks of scarlatina are not unfrequently fatal from the disorganization in the fauces and kidneys. An interesting case is related of inflammation of the secreting part of the kidneys, apparently induced by exposure to the poison of scarlatina, although no eruption came out.

B b, α. The poison of scarlatina varies in intensity at different periods, being unusually violent in close, confined, ill-ventilated neighbourhoods. The poison does not appear to be the only cause of the varieties of the disease, as it does not, by any means, invariably produce a similar form of the disease in the person infected, as that which attacked the person from whom it was caught.

B b, β. The amount of the poison received does not ordinarily appear to have much effect on the form or intensity of the disease, except that a longer time is requisite for the development of the symptoms when the dose of the poison absorbed is small. Sometimes the amount and intensity of the poison absorbed are so great as to cause speedy death, without any organic change in the tissues. Dr Tripe enquires, "what is the relation between the amount of the poison absorbed, and the extent of the resulting disease?" No necessary relation is considered to exist between them, as the disease multiplies itself by a kind of catalytic action at the expense of certain of the constituents of the blood; the quantity so produced varying according to the number of particles so decomposed.

The next part of the subject consists in the modifications produced in the disease by variations in the weather; but as this part of the subject is still unfinished, we must defer the consideration of it to a future period.—*Medical Times*, November 1848.

5.—Œdema of the Glottis successfully treated by Scarification. By Dr G. Buck, New York.—There is nothing novel in the proposal contained in Dr Buck's memoir, the saw operation having been practised by Lisfranc nearly thirty years ago; but the cases recorded (five in number), are very interesting illustrations of the success of this method of treating acute œdema of the glottis. All the five cases did well. Other three cases that occurred during the same period in the New York hospital, terminated fatally, scarifications or tracheotomy not having been resorted to.

The following is the mode of performing the operation of scarifying, employed in the cases related by Dr Buck:—

The patient being seated on a chair, with his head thrown back and supported by an assistant, he is directed to keep his mouth as wide open as possible; and if there be any difficulty in this respect, a piece of wood an inch and a quarter in width, and half an inch in thickness, is placed edgewise between the molar teeth of the left side. The forefinger of the left hand is then introduced at the right angle of the mouth, and passed down over the tongue till it encounters the epiglottis.

But little difficulty is generally experienced in carrying the end of the finger above and behind the epiglottis, so as to overlap it and press it forwards towards the base of the tongne.

Thus placed, the finger serves as a sure guide to the instrument, the scarifying portion of which is about an inch in length, and is bent nearly at right angles to the handle, which is six inches long. The knife is then conducted, with its concavity directed downwards, along the finger till its point reaches the finger nail. By elevating the handle so as to depress the blade an inch to an inch and a half farther, the cutting extremity is placed in the glottis between its edges; at this stage of the operation the knife is slightly rotated from one side to the other, a cutting motion being given it in the act of withdrawal. This may be repeated, without removing the finger, two or three times on either side. The margin of the epiglottis, and the swelling between it and the base of the tongue may be scarified still more easily with the same instrument.

Though a disagreeable sense of suffocation and choking is caused by the operation, the patient soon recovers from it, and submits to a repetition after a short interval. In every instance the operation was performed twice, and in some three times. A slight hemorrhage follows, and should be encouraged by gargling with warm

water.—*Trans. Amer. Med. Assoc.*, vol. i. p. 135.

[The œdematous parts are thus disgorged, and the respiration is so much relieved as to afford time for the operation of other remedies, and the necessity of resorting to tracheotomy may be obviated.

6.—*Localization of Cutaneous Disease.* By Dr C. Baron, Jun.—Dr B. forms ten distinct classes, according to the anatomical element of cutaneous disease. The first comprises the disorders of the vascular system —roseola, measles, scarlatina, erythema, &c. Their principal character consists in redness, and in many of them the presence of feverishness shows the participation of the general circulation in the disturbance of the capillary system of the surface. In scarlatina, according to our author, it is the venous capillary net-work which is inflamed, or rather congested; the venous arterial and lymphatic elements are inflamed in erysipelas; a chronic inflammation of the superficial vascular layers constitutes pemphigus. Their preternatural development is observed in nævus, and if the deeper-seated vessels are increased in size the disease acquires the nature of erectile tumours.

2. The papillæ are the organs of cutaneous sensation; their diseases will, therefore, be accompanied by increased or diminished local irritability, and the excessive pruritus of urticaria and prurigo, induce Dr B. to class them amongst disorders of the papillary system. In elephantiasis sensation is at first deadened, and the papillæ hypertrophied.

3. Affections of the sudoriferous system are generally observed in young subjects. They are attended usually with feverishness, and either consist in augmented secretion, as in miliaria and sudamina, of inflammation of the sudoriferous organs and capillaries of the vicinity, or in the inflammation of their ducts as in herpes.

4. Maladies of the blennogenic system (secretion of epidermis) are habitually chronic and tenacious; almost in all cases the secretion of epidermis acquires an undue degree of activity; simple congestion constitutes pityriasis, inflammation, eczema, chronic inflammation, and slight induration, psoriasis; perversion of secretion, ichthyosis; increased abundance of secretion, and of hardness of epidermis, bunions, and corns.

The fifth class consists of perversion of functions of the chromatogen or colouring apparatus. The sixth is one of the most important, comprising the maladies of the follicular system, *i. e.*, the varieties of acne and impetigo. The seventh class refers to diseases of the organs of secretion of hair, amongst which M. B. places lichen. The eighth class, which scarcely deserves that name, and might perhaps be blended in the fourth, is consecrated to diseases of the organs of secretion of nails. The ninth division has more extent and more importance. It is constituted by maladies of the fibro-cellular texture of the dermis, such as ecthyma, rupia, variola, furunculus; and, finally, the tenth class characterised by the lesion of several anatomical elements of the skin in scabies.—*Acad. de Médécine; Dr M'Carthy's Report in Med. Times*, Nov. 25, 1848.

[Dr Baron's classification is a very good plaything, but is entirely useless and unpractical. It is deeply imbued with the error of all so-called pathological classifications; that, while *professing* to be founded exclusively on facts, it in reality compels the mind to rest upon much which is wild hypothesis, if not positive error. Very much of Dr Baron's system must be placed in these categories. Why, for instance, is the "congestion" of the superficial vessels which exists in the exanthemata, treated as of such primary importance in most of them, and overlooked in urticaria? How does "simple congestion" of these vessels constitute pityriasis (class 4), while the same simple congestion is equally the pathological cause of scarlatina (class 1)? Why are the different phenomena of eczema and psoriasis (class 4), referred to exactly the same pathological cause, chronic inflammation with increased secretion of epidermis? These are only a few of the questions which might be asked, but they are sufficient to show that *precision*, the great object of all classification, is not advanced by this system, while by "assuming a virtue" which it has not, it bars the way to further improvement.]

7.—*On the Antagonism of Gout and Phthisis.* By Dr Garrod.—The gouty diathesis has been supposed inimical to the development of tubercular disease. It is true they are rarely combined in the same individual; but this is easily accounted for by the fact, that gout, in general, does not appear until the age of forty, whereas tubercular disease is much more frequent before that period. But cases do occur in which the two diseases coexist; and the following very interesting example is related by Dr Garrod:—A young man, aged twenty-eight, a native of London, whose father and grandmother

had suffered from gout, applied for relief at University College Hospital, and was admitted under the care of Dr Williams. He was a painter by trade, and for some years he had been of very intemperate habits, but until the last few had had plenty of food and clothing. From the age of seventeen, he had suffered from what he termed "rheumatism," (gout?) but had had an affection of the heart with it. Formerly he was of full habit, but about three years since began to lose both flesh and colour, although he did not feel particularly ill, and had no cough at the time. He was soon after seized with an attack of gout, both in his feet and hands; tophaceous deposits formed, and he was confined to his bed for twenty-eight weeks. About two months after his recovery he was again attacked, and then had a severe cough, with expectoration of a greenish hue. The pectoral symptoms continued for about four months, the gouty two months longer. From this date, until his admission into the hospital, he was constantly suffering from chest affection and gout; hæmoptysis had occurred once, and deposits of urate of soda frequently came away from his joints. When admitted into the hospital he was pallid and emaciated; complained of pain in various joints, arising from gouty inflammation; also of pain in his side, cough, and expectoration of a muco-purulent character. On physical examination, clear evidence was found of the existence of tubercular deposition in both lungs, especially the left, at the apex of which, a distinct cavity was indicated by the production of pectoriloquy and cavernous respiration; during the remaining month of his life, the gouty affection continued to progress, now appearing in one part, now in another, and occasionally with the discharge of urate of soda from some of the joints.

The post-mortem appearances in the lungs fully proved the accuracy of the diagnosis. The kidneys were small, and many of the tubuli were filled with a white matter, consisting of crystallized urate of soda and uric acid. An examination of the blood was also made, and it was found to contain a very large amount of uric acid, larger than Dr Garrod had ever before obtained.—*Med. Gaz.* Dec. 8.

8.—*Diagnosis of Endocarditis.*—M. Bouillaud gives the following differences between the bellows-sound in chlorosis and endocarditis.

In the former it is inconstant, soft, and short; it accompanies, but does not entirely conceal the first sound, and is most distinct in the neighbourhood of the aortic orifice, whence it is propagated to the carotids. This murmur increases when the patient is weak, and disappears on any exertion.

In the latter it is constant, rough, and prolonged; it not only accompanies, but absorbs and conceals, the first sound. It is most distinct at the apex of the heart; does not increase when the patient stands, nor cease on any exertion.—*Medical Times*, xix. p. 145.

9.—*Idiopathic Atrophy.*—Atrophy limited to a circumscribed part of the body, and supervening at a time when the patient appears in a state of perfect health, is of very rare occurrence. The following case recently occurred in Rayer's ward at La Charité:—

A journeyman, aged fifty, was for several years engaged in works requiring much exertion. He had recently (for fifteen months) been a paper-glazer. In August 1847, he perceived that his arms were becoming gradually weaker; and in January he was obliged to give up his business. On examination, his countenance was natural, and his head apparently unaffected The hands were in a state of semi-flexion, and extremely thin. The muscles of the thumb and little finger had disappeared. Both in the hands and arms the muscular system was more atrophied than the areolar. The muscles of the arm were thrown into action by galvanism; but those of the palm and the interosseous muscles were insensible to this stimulus. The legs were weak, but the patient could walk without difficulty. Sulphurous baths were prescribed, but without any apparent good result.

M. Rayer believes that in this case the atrophy of the muscles of the upper extremities was induced by over-exertion, and concludes that the cause which usually induces hypertrophy, may occasionally induce an opposite effect.—*L'Union Méd. and Med. Times*, Dec. 9. 1848.

10.—*Renal Dropsy produced by large doses of Copaiva.*—Mr Thomas mentions the case of a man, aged forty-three, who, three weeks previously to his application at the Cumberland Infirmary, contracted gonorrhœa, for which he applied to a druggist, who gave him a copaiva mixture. In order to expedite the cure, he took double the quantity prescribed. The urethral discharge entirely ceased in a few days, but new symptoms set in—much pain in the lumbar region, urine scanty and high-coloured. When seen by Mr Thomas his legs and thighs were œdematous, besides a

little effusion into the abdomen. His urine was of a smoky colour, and very albuminous. He was cupped on the loins, and ordered a drachm of compound jalap powder twice a-day, and a warm bath twice a-week. The treatment was continued, though less vigorously, for about six weeks, when he was discharged quite well.—*Medical Times*, xix. p. 144.

[There is nothing new in this observation, Schönlein and others having noticed years ago that copaiva has a tendency to produce Bright's disease. The above case, if neglected, would probably have terminated in this disease.—See Remak's *Diagnostische und Pathologische Untersuchungen*, pp. 168-9. Berlin: 1845.]

III.—PRACTICE OF SURGERY.

11.—*On the Means of insuring Success in Cases of Amputation.* By Professor C. SEDILLOT.—The object of M. Sédillot's remarks is to show, that making allowance for other causes, much of the fatality following amputations may be accounted for by the method of operation, and the subsequent plans of dressing the stump. After speaking of the circular operation generally adopted in France, and showing that to obviate the constant tendency of the bone to protrude, or the formation of a conical stump, the surgeon is obliged to compress the limbs above by a circular bandage, to prevent the muscular retraction, to support the soft parts, and maintain the integuments of the proper length; and that, besides these bandages, the parts are united by means of plasters and stitches, and covered with pledgets of lint and compresses, the whole being retained by more bandaging; he points out the bad effects of these dressings, and then proposes his method of procedure to do away with all these evils. This method is, simply to abandon the circular amputation, and to operate by a single anterior flap, the flap being so cut as to embrace two-thirds of the circumference of the limb, the remaining third being cut perpendicularly, on a level with the angles of the flap; so that, after the bone is sawn through, the flap may, by its own weight, fall upon and cover the surface of the wound, without requiring any complicated dressings. A piece of lint folded, about two finger-breadths in size, moistened with some digestive, is placed over the bone, so as to form a central canal to permit the escape of the discharge. The angles of the flap are held in apposition by means of two hare-lip pins: the lint is removed at the end of three or four days, leaving a vertical drain, in which neither blood, serum, nor pus, can accumulate.

M. Sédillot states in favour of this plan, that out of twelve amputations during the preceding fifteen months, including one of the thigh, six of the leg, one at the ankle-joint, one of the great toe, one of the fore-arm, and one of the finger, he had only lost one case, that of the great toe. The Parisian editor however remarks, that M. Baudens at Val de Grace, who adopts M. Sédillot's method, has not had a greater proportion of success than the surgeons of the civil hospitals of Paris.—*Annales de Thérapeutique Médico-Chirurgicale*, September and October, 1848.

[M. Sédillot explains, that by anterior flap, he does not use the term in its *exact* anatomical sense; that, for example, by the anterior aspect of the fore-arm, he means its *posterior* (?) and external region, and by anterior, as applied to the upper arm, he means external. He does not explain, however, what we wish especially to know, where he gets a sufficient *anterior* flap in the leg, which will, by its own weight, cover in the wound; perhaps going a little further round the limb than in the fore-arm, he gets it from its *posterior* region.

Whilst we admit that much of the success of amputation depends on the plan of operating, the after dressing and treatment, we must look to other causes less under the control of the surgeon than these, to explain the mortality of the greater amputations; but even as regards the plan of operating and treatment which M. Sédillot seems to propose as new, to say nothing of the principles involved in the method of antero-posterior flaps, recommended by Mr Liston, and the simple plan of dressing, which he advocated so strongly; had M. Sédillot taken the trouble to acquaint himself with the history of amputation in other countries, he would have found that the identical plan of operation by single flap, which he proposes, even to the position whence the flap is obtained, and the placing the pledget of lint between the bone and flap, was recommended and practised constantly by Mr O'Halloran of Limerick, in amputating the thigh, arm, and fore-arm, as far back as 1765.]

12.—*Amputation of the Ankle-Joint.* By M. ROBERT, (Hôpital Beaujon).—M. Robert performed this operation on a girl

thirteen years of age; the operation was, as regards the result, the same as that of Mr Syme, but the mode of operating differed, in as much as M. Robert commenced by disarticulating the foot, and then carried the knife behind the os calcis so as to divide the tendo-achillis, and complete the operation by forming the plantar flap last: the malleoli were then sawn off. At the time of the report, three weeks after the operation, the flap had adhered in the greater part of its extent, and the cure was going on favourably. — *Annales de Thérapeutique, Méd. Chir.*, Sept. and October 1848.

[The modification adopted by M. Robert, and which the Parisian editor seems to think less convenient than the usual plan of dissecting up the plantar flap in the first instance, has been performed here in some cases, and for our own part, after having tried both plans repeatedly on the dead body, and performed them both on the living, we think the method pursued in M. Robert's case is preferable, as being rather more expeditious, and, what is of greater consequence, causing less twisting and disturbance of the tissues composing the plantar flap, than where we begin by dissecting up that flap. The French editor remarks, that the ankle-joint amputation is at present engaging much attention in Paris, as to the after condition of the patient in regard to their ability to use the stump for walking. We should have thought the facts published by Mr Syme and others, in this country, and the cases of MM. Baudens and Jules Roux, &c., in France, would have satisfied the most sceptical. But it seems that M. Bauden's patient, after walking perfectly on the stump with the assistance of a simple shoe with a metal plate, for upwards of two years, had to submit to amputation of the leg for a return of the disease (caries). Some of the Parisian surgeons choose to attribute this to the stump being badly adapted for walking. As regards the recorded facts of Mr Syme and J. Roux, they seem to wish to form their judgment from the cases operated on within their own immediate sphere, rather than from facts reported from a distance. Of two patients operated on by M. Blandin, one is dead, and the other is cured, but the superficial sinuses which existed before the operation continue open. M. Blandin is of opinion that the patients should use an artificial leg, like that worn after amputation above the malleoli, instead of walking on the stump, and on this account he does not saw off the malleoli. We have noticed these opinions in reference to this amputation, to show how far prejudice and preconceived ideas, backed by a few isolated and misinterpreted facts, will go to prevent the general adoption of an operation, the advantages of which one would think almost self-evident. To the profession in this country, where the operation is established, and its advantages universally admitted, no comment is needed on the doubts expressed by the Parisian surgeons.]

13.—*Amputation of the Thigh.* By M. BAUDIN.—In amputating at the upper third of the thigh, on account of a gun-shot wound, M. Baudin combined the flap and circular operations, by making, from without inwards, a small anterior flap, consisting only of the skin and cellular tissue, and then completing the operation by the circular incision.

He considers this method to possess the following advantages. The semilunar flap, falling from its own weight, covers the wounded surface—the edges of the wound are more easily kept in contact—there is a free exit for the purulent discharge—and the cicatrix being situated behind, is not so liable to be injured by wearing an artificial limb.—*Gazette des Hôpitaux*, 9th November.

14.—*Case of undescribed Congenital Malformation of the Shoulder-Joint, simulating Congenital Dislocation.* Dr BELLINGHAM, on examining a patient, noticed that his right shoulder and arm presented a very different appearance from the left; the muscles, particularly the deltoid, being atrophied, and the bulk of the arm being one-half that of the opposite limb, in which the muscles were largely developed. He could not raise the arm to a right angle with the body, but all the underhand motions were well performed, and he stated that he could carry heavy bodies in the hand. On being questioned, he said this had been the condition of the arm as long as he could remember; he had never received an injury in the part until two or three years since, when the clavicle on that side was fractured.

On examination, the shoulder-joint presented somewhat the appearance of a congenital dislocation; the acromion process was very prominent, the deltoid muscle scarcely developed, and the arm about half the size of the opposite limb; in every motion of the joint, the scapula moved with the humerus, as if anchylosis had taken place; the arm could not be brought to a right angle with the body; when raised nearly to this point, there was a sudden check to its further elevation. The head of the humerus did not form any prominence in the axilla, nor was there a vacant space between the acromion pro-

cess and the head of the humerus, and the elbow did not project from the side.

On a post-mortem examination, the supra-spinatus, the infra-spinatus, and the sub-scapularis muscles were found to be atrophied and converted into fatty matter, similar to what is seen in cases of very old unreduced dislocation, where the muscles had not for many years been called into action. Scarcely any traces of the deltoid muscle existed; the biceps was wasted, as were likewise the other muscles of the arm, but they were not altered in texture. The capsular ligament of the shoulder-joint was very thick, consisting of several layers which were separated from one another by cellular tissue. At the under surface of this ligament, and apparently forming a part of it, a round very strong ligament passed from the scapula to the humerus, which became extremely tense when the arm was raised from the side, and rendered it impracticable to bring the arm above a right angle with the body, even when the muscles connected with the joint were removed. The head of the humerus was in contact with the glenoid cavity, and remained in contact with it after the muscles were cut away, and after the capsular ligament had been opened above. The scapula, clavicle, and humerus were small, resembling those of a delicate female, rather than of a labouring man. There was no appearance of the clavicle upon that side having ever been fractured.

Dr Bellingham says the condition of the shoulder-joint now described, which there is every reason to believe was congenital, must constitute a very rare form of malformation, as he had met with no account of a dissection where such a condition of the parts was observed; and the most recent work upon injuries and diseases in the vicinity of joints, by Mr Smith, contains no case resembling it.

The original malformation here, was undoubtedly in the capsular ligament of the shoulder-joint, the inferior portion of which was condensed, shortened, and converted into a kind of round ligament, which so limited the motions of the arm, that it could not be raised above a right angle with the body;—the muscles employed in raising the arm were never, therefore, called into action, and their tissue had degenerated; in some, as the supra-spinatus, the infra-spinatus, and the sub-scapularis, the muscular tissue was converted into a matter resembling fat; while the fibres of the deltoid seemed never to have been developed, so completely was its muscular tissue absent.

The scapula, clavicle, and humerus upon this side, which resembled rather those of a delicate female than of a robust man, were exhibited to the members of the society, and are now in the Museum of the Royal College of Surgeons.—*Dub. Med. Press*, July 5th, 1848.

15.—*Luxation of the Astragalus inwards; Reduction.* By MM. Thevenot and Boyer.—On the 8th of September, the patient, a heavy person, was thrown from his horse, and, when he endeavoured to rise, found that he could not stand on the right foot. He was seen soon afterwards, when the limb was found to be in the following condition. The anterior part of the foot formed a right angle with the leg, and there was neither shortening of it nor of the heel, but the whole foot had been forced outwards, so that its axis, instead of being continuous with that of the leg, was about an inch external to it. The fibula was entire, and below the external malleolus there was found a large cavity, into which the integuments could be pushed to a considerable depth; this cavity was bounded inferiorly by the superior aspect of the os calcis, which could be easily felt. The tibia was uninjured, but below the internal malleolus, a large hard polished surface was felt lying immediately under the skin. This surface was evidently the articular pulley of the astragalus, and in front of it the depression formed by the neck of that bone was felt. The malleolus rested firmly upon the external aspect of the astragalus, which had become superior. The skin at this part was much stretched and discoloured by the pressure, but not perforated.

The day after the accident, the patient having been put under the influence of chloroform, M. Boyer endeavoured to reduce the dislocation. Two assistants made extension of the heel, whilst other two maintained a counter-extension of the thigh, the leg being half flexed, with its inner aspect looking upwards. Considerable lengthening having been thus effected, he tried to push back the astragalus. The bone was easily forced into the place made by the extension, but it retained its wrong direction, and the displacement recurred as soon as the extension was lessened. Several such attempts having failed, M. Boyer, whilst the limb was being extended, pushed upon the external margin of the foot with his knee, so as to cause forcible adduction of it, and at the same time pressed with both thumbs on the superior border of the astragalus. The displaced bone was thus turned round, and resumed its right position with a loud crack, the deformity completely dis-

appeared, and the foot could be moved without causing pain. No unfavourable symptoms occurred; the patient gradually recovered the use of the limb, and he can now walk with ease.—*L'Union Médicale.*

16.—*On Strangulated Hernia.* By Mr EDWARD COCK.—The object of this memoir is to show the propriety of securing total rest, and a temporary cessation of the ordinary function of the alimentary canal, in all instances where the intestine has received an injury, whether such be the result of external violence, or of strangulation in a hernial sac. The latter class of injury, it is to be remembered, is almost necessarily enhanced and aggravated by the manipulation of the surgeon, and by the exposure and the violence offered to the bowel during the progress of an operation for strangulated hernia. The principle which should guide us in the treatment of an injured intestine, is analogous to that which we follow in the management of a broken limb. Mr C. recommends a careful abstinence, during the first few days after the operation, from the use of purgative medicines; and the free exhibition of opium, which, in such cases, he has found to act as a pure sedative, without manifesting its ordinary injurious effects as a narcotic; "producing calmness, quietude, and even cheerfulness, without impairing the appetite or interfering with the natural secretions of the body."

In support of those views he gives an account of several cases which he considers remarkable, in as much as that with this treatment the patients recovered under circumstances which are generally followed by a fatal result.

In one case the patient, a delicate female, had had an irreducible femoral hernia for sixteen months; and for a week before being seen by him, had been suffering from symptoms of obstruction of the bowels. The sac, when opened, was found to contain between four and five inches of small intestine, of a nearly black colour, firmly connected to it by old adhesions With some trouble and difficulty the adhesions were separated, and the whole of the bowel returned into the abdomen. She was much collapsed, but rallied after taking some brandy; and was ordered to have a quarter of a grain of morphia every three hours. In a fortnight the wound was nearly closed; and, during the whole of this period, she required the constant exhibition of morphia: so long as she remained under its influence she was quiet, calm, and cheerful; but when its use was suspended, even for a few hours, she became restless, irritable, and collapsed.

Another case is one of inguinal hernia of very great size. Mr C. having divided the stricture freely outside the neck of the sac, attempted in vain to return the contents. He then opened the upper part of the sac, and exposed a mass of omentum blocking up the opening of communication with the abdomen, and behind, nearly three feet of small intestine, immensely distended with flatus, and nearly black in colour. The reduction of this volume of intestine was very tedious; nearly half an hour having elapsed before it could be replaced in the abdomen. The omentum was partly returned, but a considerable portion being adherent, was left in the sac. This patient was ordered to have one grain of calomel and one grain of opium every four hours. The only other treatment necessary was the application of a mustard poultice, to relieve tenderness of the abdomen, and the use of the catheter on account of retention of urine. In a few days he was able to discontinue the use of the opium, but several weeks elapsed before the process of cure was completed, suppuration having taken place in the sac and retained omentum.—*Guy's Hospital Reports*, October 1848.

17.—*Reduction of Strangulated Hernia during Syncope.* By M. CABARET.—In the Medical Journal of Montpelier M. Cabaret describes a case where he had been endeavouring, for some time, but without success, to reduce an inguinal hernia; when the patient, having become faint from fear, and the abdominal muscles in consequence relaxed, the tumour was immediately reduced.

M. Pourcher also relates a somewhat similar case. The patient, a robust middle-aged man, had a large inguinal hernia, presenting symptoms of strangulation. Repeated attempts having been made to reduce it, but without success, he was bled from the arm while in the erect posture until syncope took place, when M. P. was able to perform the reduction with perfect ease.—*Gazette des Hôpitaux*, 7th October 1848.

18.—*Rupture of the Intestine in a Strangulated Hernia from the attempts at Reduction by the Taxis.* By M. MAISONNEUVE.—The patient, a middle-aged man, had strangulation of a congenital hernia in the tunica vaginalis. The strangulation had lasted for twenty-four hours. A gurgling sound was perceived in the sac, which gave rise to the suspicion that the intestine had been torn in the attempts to reduce it by the taxis. The operation for dividing the constriction disclosed a triangular rupture

of the intestine, which was neither so dark coloured, nor so softened as to have given way spontaneously. Some small foreign bodies of a cartilaginous nature were found floating in the serum of the sac. M. Maisonneuve, availing himself of the healthy state of the intestine, employed the suture of Dr Gely of Nantes, which has for its object the bringing and retaining in contact the serous surfaces of the two extremities of the intestinal tube (l'adossement des sereuses du tube), by a sort of overcast seam, in which, in a space of six inches, he applied sixty stitches. [This suture is a modification of a plan, the proposal of which, is claimed in France, by MM. Faure, Jobert, Denous, and Lembert.] The wound healed well, being cicatrized at the eighth day, and the patient is going on favourably.—*L'Union Méd.*, Oct. 7, 1848.

19.—*Wound of the Right Kidney successfully treated.* By M. BLANDIN.—A young man, aged twenty, received a poignard wound in the back, in the right subcostal or renal region. He was carried to the Hotel Dieu, complaining of intense pain in the right side, extending forwards towards the iliac fossa, and back towards the wound; he passed blood in micturating, and there was great general anxiety. The wound, which was horizontal, was scarcely two centimetres in length, and appeared to correspond to the anatomical region of the kidney. The position of the wound, together with the bloody urine, led M. Blandin to diagnose a wound of the kidney. The patient was bled largely, and kept perfectly quiet in the horizontal position in bed, and put on low diet. For two days after his entrance into the hospital, the urine continued bloody, but less so than at the first; the venesection was nevertheless repeated three times. On the third day, the bloody urine had disappeared, the patient was free from fever, and desired food. The small wound, however, still continues open externally, and the low diet and perfect rest are continued; but the absence of fever or other accident, and the cessation of the hæmaturia and pain, give reason to hope that the patient will soon be completely cured. Meanwhile M. Blandin keeps him in the hospital under surveillance, in case of secondary accidents resulting from the injury.—*Annales de Thérapeutique*, September and October 1848, p. 246.

At the time the above observation was reported, the patient was considered by M. Blandin to be almost cured; but, since this, unexpected accidents have supervened, and it is our duty to follow up this rare and interesting case. The patient continued much in the same state as reported in our last, and his convalescence was almost completed, when, owing to excess in eating and walking, he was seized with a sudden return of his former symptoms, namely, abundant hæmaturia, violent bilious vomiting, pains in the wounded renal region, with swelling in that part and in the shoulder, and general anxiety and fever. There seemed to be no affection of the peritoneum, nor of the intestines. These symptoms lasted for some days, in spite of the repeated application of large numbers of leeches and of baths. The violence of the symptoms was assuaged by these means; but a few days later the same causes reproduced the same effects, which were combated by similar measures. At present—about a month from the time of the infliction of the injury, and a few days after the third return of the morbid phenomena—the patient, having lost an enormous quantity of blood by the urinary passages, and also by the general and local bleedings, is feeble, pale, and exsanguinated, like persons who have suffered from severe hemorrhages. M. Blandin keeps him in bed, restricts him to a moderate diet, and causes him to continue the baths. He thinks justly that the same symptoms may return, and perhaps compromise the life of the patient. We will notice the final termination of this case; for it is one of a class of cases which are of rare occurrence and of great interest.—*Annales de Thérapeutique*, Nov. 1848.

IV.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

20.—*In what Cases (other than of Contracted Pelvis) is it proper to induce Abortion or Premature Labour?* Professor PAUL DUBOIS.—In the lectures, of which we propose to give an abstract, M. Dubois confines himself to those cases where the safety of the mother is in question, not regarding in any respect whether the child is viable or not. This absolute abandonment of the interests of the infant, when the life of the mother is seriously endangered, although a principle not admitted by many accoucheurs, now finds less and less opposition every day. M.

Dubois lays down the following propositions:—

Pregnancy introduces into the economy numerous physiological and anatomical changes;—

Among these changes some are constant; as the expansion of the uterus, and the vascular development of this organ.

Others are variable; such as the phenomena arising from sympathy between the uterus and other organs.

These changes are generally confined within limits compatible with the general health;—

Sometimes they exceed these limits, and give rise to morbid affections more or less serious, and such that the only resource for the mother's safety is to bring on labour.

Independently of the affections alluded to above, there are other diseases which may develop themselves during pregnancy, and, in addition, be aggravated by the mere co-existence along with them of that state. This aggravation may arise from mechanical conditions, or by way of sympathy, and may render necessary the induction of labour.

A case of severe bronchitis during pregnancy lately occurred in M. Dubois' clinique, where he had resolved to induce premature labour. But a favourable and sudden change took place in the disease, and rendered this operation unnecessary.

The following additional propositions are laid down by M. Dubois:—

1. Premature labour is more certainly indicated and induced with more chance of success, according as the morbid states for which it is resorted to as a cure are more closely connected with the pregnancy, and the necessary concomitant conditions of that state.

2. Further, success is more probable according as the circumstances indicating the operation are likely to disappear on the cessation of pregnancy.

3. It is necessary that the operative procedure be simple, and such as adds no additional danger to that which already exists.

From these propositions we may deduce the following consequences:—That artificial labour will succeed best in those maladies aggravated chiefly by the mechanical changes in the uterus; whilst, on the other hand, the chances of success will be less when the operation is performed for an intercurrent disease. Further, those cases arising from, and depending upon, simply mechanical causes, will be more likely to be benefited than those arising from sympathetic changes.

The first mechanical condition requiring the operation, is *excessive dilatation of the uterus by superabundance of liquor amnii*. In illustration, a case occurring in the practice of M. Duclos (see Bulletin de la Faculté, tom. vi. p. 222) is cited, where artificially-induced labour evidently saved the mother's life. Another interesting case is mentioned, where M. Stoltz had resolved to resort to the same plan under circumstances of the greatest urgency, but nature had completed the work before his arrival at the patient. The waters had flown off, and complete delivery restored the woman to comparative health.

The second set of cases sometimes demanding the operation, are those where, in addition to the pregnant uterus, *the abdomen contains a large tumour*. Thirdly, cases where, from *malconformation of the pelvis and trunk*, there is not sufficient space for the uterus to develop itself. We may remark, however, that in these last sets of cases, premature labour generally comes on spontaneously.

Fourthly, cases of *retroversion of the uterus*, in which it becomes impacted in the small pelvis.

Fifthly, those cases of *uterine hemorrhage* where nothing but the evacuation of the ovum, and the contraction of the uterus, will stop the bleeding.

We now come to another series of cases demanding the operation; and firstly, we mention those nervous diseases which may demand it when they exist to an excessive and dangerous degree, as *chorea, convulsions*, &c. But M. Dubois inculcates extreme caution in such cases, as also in cases of *obstinate vomiting* during pregnancy. Two cases are mentioned in which *cholera* supervened upon pregnancy; in one labour was induced, in the other it came on spontaneously; both women recovered.

There is another series of cases sometimes demanding the operation; namely, where there exists chronic disease, very much aggravated by the mechanical distension of the uterus, as *disease of the heart, of the aorta, asthma*, &c.

Again, it has been proposed to bring on labour in cases where the child has been previously found to *die at some regular time*, before the completion of the ninth month. But this ought to be done only when the infant is still alive and viable, and even then it should be resorted to with reserve, as there may be hope that the disease which caused the death of the child in a former pregnancy, may have now disappeared.—*L'Union Médicale*, November and October 1488.

21.—*Cause of Hemorrhage in the latter*

Months of Pregnancy in Cases of Placenta Prævia. By Dr Scanzoni.—Ever since the time of Levret the occurrence of unavoidable hemorrhage during the three last months of pregnancy has been ascribed to the development and disappearance of the cervix uteri from above downwards—in other words, to the dilatation of the internal orifice of the neck of the womb. This theory Dr Scanzoni considers far from being proved. He believes that in advanced pregnancy the external, and not the internal, orifice of the neck of the womb becomes dilated and expanded over the lower surface, as it were, of the womb itself, and that the internal orifice, composed of contractile tissue, remains undeveloped, and forming the single opening into the cavity of the organ. These remarks may be easily verified in the case of a primipara, or where the nabothian follicles are well developed. In such cases the lips of the lower orifice of the cervix uteri may be seen or felt at some distance from the os, and expanded around it in the form of a circle.

Further, Dr Scanzoni remarks that, during the first six months of utero-gestation, it is the upper half of the womb which is chiefly or almost exclusively developed, in order to enclose the enlarging ovum; that it is during these same six months that the mass of the placenta becomes most rapidly increased in size, and consequently that when inserted, as is usually the case, upon the lateral walls of the uterine cavity, it grows consentaneously with these walls. But, on the other hand, during the three last months of pregnancy, the lower half of the uterus expands very rapidly. The uterus, which up till the sixth month was pyriform in shape, now becomes ovoid. And if the placenta, having attained nearly its full development during the first six months, finds itself implanted over or near the cervix, which is developed during the last three months, then its vessels are liable to be put on the stretch and ruptured, by the disproportionate growth of that part of the uterus on which it is inserted, and hence the hemorrhagy.—*L'Union Médicale*, Nov. 21, 1848.

22.—*Case of Early Pregnancy.* By Mr John Smith of Coventry.—Julia Amelia Sprayson, twelve years and a half old, was delivered on the 16th September of a living healthy child. She made a good recovery, and had a copious flow of milk. She menstruated for the first time when she was in her eleventh year, and a few months afterwards was seduced. Several examples are on record where pregnancy has occurred in very early life; but our author is not aware of any well-accredited case, in this country, of a child at twelve and a half years of age giving birth to a living healthy infant.—*Medical Gazette*, Nov. 3, 1848.

23.—*Puerperal Insanity.* By Dr Webster.—In a valuable communication to the Westminster Medical Society, on the subject of puerperal insanity, Dr Webster entered at considerable length into the statistics of the disease. To illustrate its frequency as compared with that of other forms of mental derangement, he stated, that in 1091 curable female patients recently attacked by insanity, and admitted into Bethlem Hospital, during the last six years, 131, or one eighth of the whole, were puerperal cases; thus showing that the malady is not so unfrequent as many may perhaps believe. Again, as to the curability of this form of mania, more recoveries were reported than in the other varieties of lunacy; 81 puerperal patients having been cured, or at the rate of 61·83 per cent.; whereas the average recoveries during the last twenty years, in all cases of insane females treated at this institution, was 53·67 per hundred. Hence, three in every five cases of puerperal insanity may be confidently expected to get well within a year. In regard to hereditary tendency to mental disease, 51 of the 131 patients were so predisposed, or 39 per cent.; whilst 41 were suicidal, being at the rate of 31 in every 100. Both these peculiarities are of much importance in this malady, and materially influence the disease, its progress, and result. The total deaths in the 131 puerperal patients amounted to six, or four and a half per cent., thus making the average rate of mortality nearly the same as in the other species of insanity, taken collectively. The particulars of the fatal cases, and pathology, next occupied attention, and Dr Webster stated, that three of the six patients who died were suicidal and hereditary; one was only hereditarily predisposed to insanity, but not suicidal; whilst two, it was reported, had neither of these peculiarities; and none ever were insane previously. In addition to these facts, Dr Webster also mentioned, that half the deaths occurred in patients who were not affected longer than fifteen days, the shortest period being eleven days, and all were attacked by insanity within seventeen days after their confinement. In none of the dissections were any morbid appearances ob-

served in the abdomen, but the lungs always appeared diseased, as also the brain and membranes. The details of one autopsy were then described, as a specimen of the diseased changes of structure frequently met with in puerperal mania, the principal morbid alterations being, turgidity of the blood-vessels of the brain and membranes; large, bloody points on cutting the cerebral substance; slight serous infiltration of the pia matter, and considerable effusion of fluid in the fifth ventricle; adhesion and purulent ulceration were noticed in the left lung, with hepatization in other portions of that organ, and in the right lung partial pneumonia in the congestive stage. Although this patient had been delivered only twenty-six days prior to her death, no corpus luteum could be discovered in either ovary, nor any diseased changes of structure in the abdomen. Notwithstanding it appeared rather a digression, the author, in his paper, remarked, that grangrene of the lungs, however rare an occurrence in persons carried off by bodily disease, but without any mental affection, sloughing of that organ was not unfrequent in lunatics. He said so from his own knowledge, and others had also made similar observations, especially in continential asylums for the insane. Dr Webster afterwards alluded to the treatment of puerperal insanity; and considering cerebral irritation, combined with great exhaustion of the nervous system generally, to constitute the true character of this disease, and that it rarely, if ever, proves inflammatory, he thought depletion, or the use of strong antiphlogistic remedies, became very seldom admissible. Leeches appeared in some cases advisable, but even then should be applied with great caution, and their effects carefully watched. As a general maxim, the author advised the same principles to be followed in the treatment of this malady as in delirium tremens, since the nature of the two diseases were somewhat analogous. Opium, camphor, ammonia, and aromatics, with some of the diffusible stimuli, proved excellent remedies, and ought to be chiefly relied upon. When opium fails to procure sleep, so beneficial in this, as indeed, in every form of insanity—then conium, hyoscyamus, or Indian hemp, may be substituted. Mild purgatives, to open the bowels, and sometimes cathartics, should be prescribed; but powerful drastic medicines are seldom advisable. Enemata also are useful, and sometimes with turpentine. When the disease assumes a more chronic form, setons or issues may be made in the neck, &c. The shower-bath, from its strengthening influence, then acts beneficially, whilst tonic remedies, with more nutritious food, become necessary, and prove advantageous; indeed, low diet is very often prejudicial in insane pntients, and it has been long remarked in many asylums, that improved nutriment, especially in lunatics who have previously suffered privations, frequently becomes a powerful means for promoting recovery. In recent cases of puerperal insanity, when the circulation is accelerated, accompanied by evident congestation of the brain, leeches to the temples, and behind the ears, or blisters, might then be applied, and afterwards cooling lotions, with ice to the head; whilst tartar—emetic, or ipecacuanha, in nauseating doses, and digitalis, may be administered for the same object. Besides medical treatment, moral means, with judicious occupation and amusements, when proper for the patient, must not be overlooked, as these very often constitute aperitive adjuncts in the management of the insane.—*Lancet*, Dec. 2, 1848.

24.—*The Causes of Endemic Puerperal Fever.* By C. H. F. ROUTH.—There are three lying-in departments in the General Hospital of Vienna. To one of these, strangers are not admitted. Of the two others, to which only the author's remarks refer, one is destined for the instruction of medical men and midwives, the other for the instruction of midwives only. The average number of deliveries in each department is from 250 to 300 per month. The mortality in the division for midwives and medical men has generally been 30 per month, and has occasionally been 70. In the division for midwives only, the number of deaths has generally been from 7 to 9 per month. The clinical instruction is conducted on precisely the same general plan in the two departments. But the medical men receive also practical instruction in a private course, in which the operations are performed on the dead body of some female; while the midwives receive this instruction by means of the leather phantom.

The frightful mortality in the division to which medical men are admitted became the subject of a Government inquiry, and the number of students in attendance was reduced from forty to about thirty. The mortality, however, remained the same as before. On inquiry, it was found that in other countries

where there were two divisions in the lying-in hospitals, one for midwives, and another for medical men, the mortality was far greater in the latter. The author shows that this difference could not depend on the manipulations of male attendants being more rough than those of midwives, nor to the influence of contagion or infection. He adopts the explanation proposed by Dr Lemelweiss, the assistant physician of that division of the Vienna lying-in hospital in which the great mortality has occurred, namely, that the real cause of the mortality from puerperal fever there was the "uncleanliness of medical men and students in attendance;" their hands being impregnated with cadaveric matter through dissecting, making autopsies, and performing obstetric operations on dead bodies. Dr Lemelweiss recommended all students attending his division of the lying-in hospital not to handle dead matter, or, if they did so, forbad them to make any examinations of the patients till the following day. And he directed every student to wash his hands in a solution of chlorine prior to, and after, every examination made on the living subject. The result was, that the number of deaths was reduced from 30 per month to 7 per month, —the usual average mortality of the division for midwives only.

The author makes some remarks on the modes in which the cadaveric matter may be introduced from the hand of the medical attendant into the system of the woman. He then describes the characters of the puerperal disease, so fatal in the Vienna hospital, with the view of demonstrating its resemblance to the effects of a poisoned dissection-wound. — *Medical Times*, December 9, 1848.

25.—*The Cure of Ovarian Tumours.* By Drs Buehring and Tilt.—Dr Buehring, in defending the total extirpation of dropsical ovaria, justly recalls to mind the results of Dr Southam's investigations, which show that the average duration of life in those affected with ovarian dropsy is, under the best circumstances, not above four or five years; and further, that the ordinary palliative treatment by tapping, far from being without danger, carries off at least one in every five of those on whom this operation is performed for the first time.

Dr Buehring believes that extirpation is the only sure means of curing every kind of ovarian dropsy; all other cures, including those by natural processes, have in many thousand cases produced results far from being so satisfactory as in those numerous cases where the operation of extirpation has proved successful.

Considering that the statistics of total extirpation already show a mortality of only one in every three operated on, it may be expected that, when a timely and early operation is resorted to, the favourable results will be much increased; for the incision through the abdominal parietes will be smaller, and the system will not have been already debilitated by the disease and by the medicines, and adhesions will not likely be already formed. After the operation, too, peritonitis will be much less likely to arise, and will be more easily combated.

When the tumour is large it will be advisable, previously to operating, to have its fluid contents drawn off, so that a comparatively small incision into the abdominal parietes may suffice.

The best seat of incision is towards the side of the abdomen, between the lower ribs and the pectineal line. When the incision is made in this situation, the matter more easily flows off during the recovery.—*Die Heilung der Eierstock Geschwuelste*, Berlin, 1848.

"Ovariotomy," says Dr Tilt, "is a valuable conquest of modern surgery; and I do not suppose it will fall into disuse, provided we continue to give greater certainty to our diagnosis in this complaint. Since the attention of the profession has been particularly given to this subject, much has been done to improve the accuracy of our diagnosis. With the assistance of percussion, the stethoscope, Dr Simpson's uterine sound, and various other additional modes of investigation, let us at at least be permitted to hope that we shall hear no more of pregnant women tapped for dropsy, nor of surgeons doomed to search among the folds of healthy intestines for tumours which never existed. If it were necessary to give a palpable proof of the utility of a good diagnosis in this as in every other disease, I would merely state that those who have paid more attention than others to the manifestations of ovarian dropsy, and who seem to have been the most careful in the selection of their cases, can also, as operators, boast of the greatest amount of success."

The mortality, according to Dr Tilt's table of ovariotomy operations, is one in three.

Dr Tilt enumerates the following practical deductions :—

"1. That small and moderate-sized tumours may be cured by preparations of iodine, given in large doses internally as well as externally, the contents of the cysts being re-absorbed by the walls of the cysts, as in the cases seen by Dr Rayer and Madame Boivin, or else voided per rectum, or per vaginum, as in many recorded cases.

"2. That tapping per abdomen, if employed as a palliative, and without any view towards the radical cure of the patient, should be deferred as long as possible, modern statistics having confirmed Morgagni's opinion of the danger of the operation.

"3. That when the cyst is voluminous, and felt bulging in the vagina, there is a sufficient number of successful cases to countenance the puncture of the cyst per vaginam, an India-rubber sound being left in the cavity of the cyst, and moderate pressure being made to the abdomen.

"4. That the rupture of the monolocular ovarian cysts, with the effusion of their contents into the peritoneal cavity, instead of being attended (as is even now generally supposed) by the most alarming symptoms of peritonitis, is, generally speaking, unaccompanied by any alarming symptom whatever, thus warranting the sub-cutanean incision of the cyst—an operation which has been successfully performed.

"5. That the ulcerative opening of the cyst, after the adhesion of its walls to the abdominal parietes (the new plan of treatment I propose in certain cases of ovarian dropsy) is supported alike by the complete success by which it has been followed in the case I have recorded, and by the success attending a somewhat similar plan of treatment in hydatid cysts of the liver.

"6. That ovariotomy should be reserved for cases of multilocular ovarian cysts, and those monolocular cysts where there is a considerable amount of solid deposit, unless from their diminutive size, or the absence of symptoms, they do not menace the patient's life by their rapid increase."—*Lancet*, Nov. 11, 1848.

V.—MATERIA MEDICA AND THERAPEUTICS.

26.—*Physiological and Therapeutic Action of Atropia.* By MM. BOUCHARDAT and STUART-COOPER.—In the *Retrospect* for 1848, p. 180, we pointed out the advantages of atropia as an application to the eyeball to produce dilatation of the pupil. The authors of this memoir maintain, in addition, its superiority over the other preparations of belladonna for internal use, and have undertaken the present investigation to determine with more accuracy its physiological and medicinal action.

It was already known that rabbits could eat belladonna leaves with impunity; and MM. Bouchardat and Cooper have repeated the experiment in a very conclusive manner. Two rabbits were fed exclusively on belladonna leaves for a month without their health suffering in the slightest degree. The only observable effect was slight dilatation of the pupil.

To determine whether or not this inactivity was owing to the destruction of the active principle in digestion, they placed under the skin of a rabbit, successively at several days' interval, 1 centigr., 5 centigr., and 0·15 gramme (¼—17 grs.) without giving rise to more than temporary uneasiness. [The authors observe, "Their experiments demonstrate that the atropine cannot be considered a poison to rabbits." We do not think that the experiments warrant this conclusion, inasmuch as the atropine was introduced into the cellular tissue in the solid form. The fluids which it meets with there, having an alkaline reaction, are not adapted for its solution, and hence the absorption of the poison is probably conducted very gradually. Now, a dose of any narcotic, however powerful, which would prove poisonous if taken at once into the circulation, will exert little or no effect if introduced in a very slow and gradual manner. It is very possible, therefore, that if the atropine in the above experiments had been employed in the form of solution, the result would have been different.]

Introduced in the solid form into the cellular tissue of *dogs* in doses of 1½ and 2½ grs. it occasioned, after a few minutes, weakness, inability to walk, and shivering. After an hour or two, these symptoms disappeared, and the animals recovered their normal state.

Ten centigr. (1½ grs.) dissolved in some water, with the aid of a drop of muriatic acid, were injected into the crural vein of a moderate-sized dog. Immediately the animal uttered an acute and prolonged cry, then suddenly fell, to all appearance, dead, with the body relaxed and motionless. Five to

six minutes passed without any appearance of life; then he began to moan slightly, and to the great surprise of the experimenters rapidly recovered. This experiment was often repeated with the same result, the dose being so high, in one instance, as 0·30 gramme (4⅔ gra.) Thus, although its action in dogs is very remarkable, its power to destroy life does not appear great. [We postpone the examination of its physiological and therapeutic action on men till next month.]

27.—*The Reaction of Sulphuric Acid on Cod-Liver Oil.*—At p. 240 of the *Retrospect*, the reader will find Mr Hockin's proposal to use sulphuric acid as a test for the purity or presence of cod-liver oil. Mr Husband states that the violet tint produced by adding a few drops of the acid to it on a porcelain slab, is not peculiar to the cod-oil, but is common to it, and the hake (*merlucius valgaris*) liver oil, and probably the oil obtained from other species of the order *malacopterygii*. The violet colour does not indicate a large quantity of iodine.—*Ed. Pharm. Jour.*—*Pharm. Jour.* Nov. 1, 1848.

28.—*On Drug-Grinding.* By Professor Redwood.—Although the details of this process interest the pharmaceutist more especially, they also demand our attention, as the operations connected with the pulverization of drugs affect their composition and strength, and consequently their medicinal power. The process is generally conducted by persons who make it their special business, and who are called drug-grinders; their establishments are called drug-mills, and the implements used are the stamping-mill and the grinding-mill. The first of these machines resembles in its action the pestle and mortar, and effects comminution by *contusion;* it is used for tough substances, as orchis root and nux vomica. Their passage through this mill is preliminary to their introduction into the second, in which the great majority of drugs are reduced to powder by *trituration*.

Before placing them in the mill, the drugs must be thoroughly dried, and for this purpose they are cut into small pieces, and placed in a room heated to 120° by means of a steam-pipe. It is often necessary to continue the drying process for a long period, during which the drugs lose various volatile ingredients, in addition to their hygrometric moisture; and if the efficacy of the medicine depend upon their volatile parts, it must suffer deterioration. Thus, myrrh, valerian, cardamoms, cinnamon, and spices, generally lose some of their efficacy in being reduced to fine powder. It is possible that other drugs than those mentioned may suffer injury in drying.

In the entire operation of grinding, drugs undergo a loss of weight, occasioned by the evaporation of water and other volatile constituents in the drying-room, and by the waste from dissipation in the form of dust, and from adhesion to the apparatus, in the grinding-room. It must be obvious that the amount of loss thus sustained will not be uniform; it will vary according to the nature of the substance under operation, and even with substances of the same nature, the loss will depend upon the quantity operated upon at a time, and their state of dryness when sent to the mill. The rule adopted among the London drug-grinders, has been to have allowed to them four pounds on every hundred-weight of the substance ground, for loss in the process. Thus, if a hundred-weight of rhubarb were sent to the drug-mills, 108 lbs. of powder, including the gruffs, would be returned. It matters not what the substance is, or the condition it might be in, the drug-grinder would be expected to produce 108 lbs. of powder from 112 lbs. of raw material. The same allowance would also be made, unless otherwise agreed between the parties, for all other drugs which required drying previously to their being powdered. This is called the four per cent. system, four pounds being the allowance for loss upon every hundred-weight of substance powdered. But the fact is, that the average loss is more than four per cent., and with some drugs, as rhubarb, aloes, opium, gentian, jalap, and squill, it is much higher, reaching in these medicines to fourteen and sixteen per cent. Now, the difference between the four and fifteen per cent. is made up by the drug-grinder, and it cannot be reasonably supposed that he will use good jalap or gentian for this purpose. It is saw-dust which makes up the difference. Unfortunately it is the weakest and worst drugs which suffer the greatest loss, and so receive the largest admixture of saw-dust. Hence an evident cause of disparity in the strength of powders. Worse than that, the system sanctions the practice of adulteration, and affords facilities for those who are so disposed to pursue a ruinous competition in price at the sacrifice of quality. The remedy for this evil is obvious; the grinder ought to be allowed the entire loss which the drug sustains in passing through his hands.—*Pharm. Journ.*, Nov. 1, 1848.

29.—*Application of the Tincture of Iodine to the Pustules of Small-pox.* The author affirms, that the development of the pustules may be arrested, and cicatrices prevented, by painting them with the tincture of iodine once every day during the first five or six days of their appearance. The swelling of the skin diminishes, the pustules disappear with little or no suppuration, and the crusts which remain fall without leaving any traces. This is a cleaner application than the mercurial ointment.—*British American Journal.*

30.—*Report of the Committee of the American Medical Association on Indigenous Medical Botany.* Dr DAVIS, *Reporter.* —RUMEX; *Water or Yellow-dock.* Several species of rumex possess medicinal properties, and are used indiscriminately in the United States. The species in most common use there are the crispus and obtusifolius; they are both indigenous to Great Britain. The root is the part employed, and has ascribed to it astringent and slightly tonic properties; but the committee conceive its chief value to consist in its alterative and gently laxative qualities. They recommend it as a substitute for the expensive sarsaparilla, over which its laxative power gives it a decided advantage. It is thus especially adapted to those cases of venereal, scrofulous, and cutaneous diseases, accompanied by torpid bowels and inactive secretion of the abdominal viscera.

It is best given in decoction, made by boiling one ounce of the dried root in a pint of water. Of this, one or two fluid ounces may be given three or four times a day. It also forms a convenient menstruum for the administration of the preparations of iodine, mercury, &c.

The LYCOPUS VIRGINICUS, *or Bugle-weed,* has been known for many years to the physicians of the United States, on account of its astringent qualities. It is also a sedative to the vascular system, and has a marked power in allaying irritability. The committee strongly recommend its use in internal hemorrhages, diarrhœas, and chronic coughs. It should be gathered in flower, and carefully preserved in substance. The best form of administration is that of infusion, of which from a gill to a pint may be given daily.—[Perhaps the *Lycopus Europœus,* or common gipsy wort, possesses similar properties.]

CIMICIFUGA RACEMOSA—*Actœa Racemosa—Black Cohosh.* The root of this plant has been used to a limited extent in America for many years; but, from the observations of the committee, it appears that the prevailing opinions in regard to its action are entirely erroneous. It has been termed by different authors a stimulating tonic, diaphoretic and expectorant. According to the committee, the drug is neither a stimulant or sensible promoter of the excretions, but a pure and direct sedative. It uniformly lessens the force and frequency of the pulse, soothes pain, and allays irritability; in large doses producing vertigo and dimness of vision.

The therapeutic applications of such a drug are, of course, extensive. The committee recommend its employment, especially in acute rheumatism, in pulmonary affections, in chorea and hysteria. The root yields its specific virtues more perfectly to alcohol than to water. The tincture is prepared by macerating four ounces of the root in a pint of diluted alcohol, of which from thirty to sixty drops may be given every one, two, four, or six hours, according to the nature and severity of the case, or until its physiological action is manifest.

[Should further trials confirm the above statements, this plant will form an interesting addition to the list of pure sedatives derived from the vegetable kingdom, of which monkshood may be taken as the type.]—*Transactions of the American Medical Association,* vol. i. p. 345, et seq.

31.—*On Papaverine, a New Base in Opium.* By Dr GEORGE MERCK.—Opium appears to be an inexhaustible source of new substances, especially of those which possess basic properties. Five such substances have already been discovered in it, and have been established as peculiar; and Dr Merck has now succeeded in discovering, while examining in the laboratory at Giessen a quantity of accumulated residues of preparations of morphia, a new basis, which he calls *papaverine.*

This base crystallizes from spirit of wine in confused, aggregated, acicular, white crystals; from ether they are obtained somewhat larger. In cold spirit of wine it is not easily dissolved. It is more soluble in boiling spirit, from which it crystallizes on cooling. In cold ether it dissolves but indifferently; from a boiling solution, crystals precipitate when cold. In water it is insoluble. Slightly reddened litmus paper is rendered blue by the solution. When the crystals are treated with concentrated sulphuric acid, they become blue.

With acids, papaverine forms salts, which for the most part are difficultly soluble in water; the hydrochlorate is particularly distinguished by the facility with which it crystallizes.

The formula of papaverine is, C_{40} H_{21} NO_8.

This new substance differs from the bases hitherto discovered in opium, and it is chiefly the salts and their unequal oleaginous and crystalline nature which characterise it, and distinguish it from narcotine, to which the pure base has otherwise some resemblance.—*Annalen der Chemie und Pharm.*, April; and *Pharm. Journ.*

32.—*Gutta Percha Membrane, for protecting the Skin against the Contagion of Animal Poisons.* By WILLIAM ACTON, Esq.—The author states that he has been engaged in performing various experiments with solutions of gun cotton, gutta percha, and caoutchouc, with a view of testing their property of protecting the surface from the influence, by contact of contagious poisons, and the following are the conclusions at which he arrived:—1. That a solution of gun cotton, when dry, corrugates the skin too much to be available for the purposes required. 2. That gutta percha alone is devoid of elasticity and sufficient adhesive quality, whilst the solution of caoutchouc wants body and is too sticky; but that, 3. The compound solution of caoutchouc and gutta percha possesses the requisite qualities to fulfil the purpose required. It is prepared by adding a drachm of gutta percha to an ounce of benzole (the volatile principle of coal naphtha), and ten grains of India rubber to the same quantity of benzole, each being dissolved at a gentle heat, and then mixed in equal proportions. The author has employed this compound in painting the surface surrounding a chancre with the solution, and found that the acrid secretion had no effect upon it when dried, and warm or cold water may be applied with impunity. He considers that it may be employed advantageously in many and various ways, as in protecting the hands during *post-mortem* examinations, in preserving the cheek from excoriation in gonorrhœal ophthalmia, and in covering the parts contiguous to a sore where water-dressing is the application, &c. A letter from Mr Quekett to the author, states the results of that gentleman's examination of these several solutions under the microscope. A dried film of the compound is described by him to be perfectly elastic and free from perforations, though in many parts less than the $\frac{1}{500}$ of an inch in thickness.

33.—*Oil of Turpentine in Neuralgia.* By Dr LERICHE, of Lyons.—The author relates cases of neuralgia successfully treated by the exhibition of small doses of essence of turpentine. The quantity daily administered to the patients did not exceed twenty minims.—*Journ. de Méd. de Lyons.*

VI.—DIETETICS, HYGIENE, AND MEDICAL POLICE.

34.—*Deleterious Effects of Mercurial Vapours in an Hospital Ward.* By M. LEFEVRE, physician of the Naval Hospital of Rochefort.—One of the fever wards of the hospital under M. Lefevre's care, which is about 48 yards long, 13 broad, vaulted roofed, and of a capacity of about 7800 cubic feet (English measure), became in the summer of 1846 so infested with bugs that the patients could not enjoy the least sleep. It was not till the end of the year that it was resolved to empty the ward, and adopt measures for removing this nuisance. It was resolved to destroy the bugs by mercurial fumigation. For this purpose, on 12th November, the beds having been collected in groups at various parts of the ward, the stoves of the room were heated so as to raise its temperature to that of from 68° to 77° Fahr. All the openings into the ward having been closely shut; two kilogrammes [nearly 4½ imperial pounds] of metallic mercury were divided into five portions, which were placed in as many crucibles, heated by chauffers at nearly equal distances, and near the beds. The heat was continued till all the mercury was volatilized, and to favour its diffusion through the ward, its internal temperature was maintained at an equable high temperature day and night. When it was supposed that the mercury had acted long enough to destroy all the bugs, with their ova and larvæ, the ward was again heated several times, and freely ventilated. After twenty or twenty-five days of alternate heating and ventilation, the ward was cleaned anew, and was then thought fit for the reception of patients.

On 13th December, at three P.M., forty-three convicts affected with various disorders were placed in the ward. The weather at the time was rather cold, and the heat of the ward moderate. On the morning of the 15th, *i. e.*, thirty-nine hours after the location of the patients there, M. Lefevre was informed that seve-

ral of them were complaining of an unusual sense of heat in the mouth, the gums were red and swollen, and there was an incessant desire to spit. On the 16th, the number of cases of ptyalism was increased, and the ward was forthwith evacuated. Nevertheless, on the 18th, thirty-nine of the forty-three men were affected with mercurial stomatitis of various degrees of severity. In some the gums and muscles of the cheeks were ulcerated, the lips and tongue swollen. There were in some of them, swelling of the submaxillary, sublingual, and cervical glands, looseness of the teeth, pain in the ears, &c. The salivation was abundant, and the breath fœtid. Several had diarrhœa and tormina.

The greater number were cured by ordinary means in fifteen to twenty days. In some the affection was of longer duration, and one returned to hospital with a relapse. In this man the teeth remained loose, and several of them were lost.

The four men who alone escaped the action of the mercury, were the subjects of various diseases. They were placed in different parts of the ward, and as much exposed to the mercurial vapour as their less fortunate neighbours. Five superintendents, who remained in the ward only during the night, equally escaped, as well as the convicts employed as nurses, and one sister of charity, who all had opportunities during several hours of the day of breathing a purer air than that of the ward.

After the removal of the patients, attention was turned towards the means of ridding the ward of the remains of the mercury. For this purpose, it was again heated to about 70° Fahr., and abundance of chlorine disengaged in it during several days. The bedding was then beaten in the open air, and all the beds, windows, and all the surfaces which might retain any mercury, carefully washed. The walls were then white-washed with lime, and the beds and furniture repainted. The ward was shut for three months, and freely ventilated whenever the weather permitted. On the 4th of March 1847, the patients were replaced in it in small numbers at first, and no more mercurial effects were experienced; *but the bugs were not destroyed*—several were found alive during the various cleansing operations, and now they have repropagated so abundantly as to have again infested the beds.—*Journal de Médecine et de Chirurgie Pratiques*, October 1848.

35.—*Observations on the injurious Effects of the Emanations from Houses painted with Arsenite of Copper (Scheele's Green).* By Dr BASEDOW of Merseburg.—The author had in 1846 published an essay on the subject, and in September 1847, in consequence of a memorial from him, the government forbade the application of this colour to paper-hangings or wall-painting under a penalty of from five to fifty dollars. The authorities invited the district physicians to communicate to them any cases which might have come under their notice, and also to ascertain the opinion of the apothecaries on the subject. The returns thus obtained were submitted to the inspection of the author. Of sixteen district physicians who were consulted, eight had met with such cases, eight had not. Of the former eight, five had made their observations after their attention was drawn to the subject by the published cases. All the apothecaries who took the subject into consideration agreed, that under the conditions pointed out by the author as favourable to it, the occurrence of noxious emanations from this pigment was not merely a possible, but a necessary occurrence. Of two chemists specially consulted, one considered the evolution of arsenical vapours from the Scheele's green as unavoidable, and always injurious to health; the other only rejects as erroneous the author's supposition, that cacodyl or alcarsin is formed, and considers the application of the colour to paper-hangings (*tapeten*) as more dangerous than its use as a paint upon plaster.

Of the physicians who were consulted, Dr Schmidt of Rossla appears the most frequently to have recognised these emanations and their pernicious effects, and he gives an account of their action on the inhabitants of such contaminated dwellings, agreeing with that of the author. These effects consist chiefly, according to him, in pseudo-rheumatic pains, which come and go without presenting any other rheumatic phenomena, and without regular crises, and are not removed by any well established means; on the contrary, more frequently, even when the source of mischief is withdrawn, they leave, like other metallic poisons, permanent impairment of the general health. According to him, the most common forms of affection produced in this way, are flying neuralgic pains in the head, throat, and breast, faintness, hoarseness, dry cough, general lassitude and emaciation, and paralytic states of individual organs, especially weakness of vision, and particularly marked eruptions. All the inhabitants of such dwellings do not always suffer in an equal degree. Upon these observations the author remarks, that in such pseudo-rheumatic affections

in adults, the urine is always superabundant, pale and watery, as in hysterical attacks, and may lead the case to be mistaken for *diabetes insipidus*. In children, where dyspepsia commonly occurs, the stools are sometimes fluid, sometimes very costive, and always deficient in bile. In older children, the complaints which they make of various sorts of pains, especially in the legs, appear to depend upon spinal irritation. They are capricious, and in the intervals often placid, and when they are exposed to the vapours for years they acquire remarkably old features. Rachitic appearances in their growth have not been observed. In those who have been chronically affected by the arsenic, an irritable frame of mind is always observed. When all the inhabitants of such apartments do not suffer equally, this depends upon the employment of some keeping them more out of the dwelling-house, or from a greater individual power of resistance. The periodic exacerbation of the injurious effects, is in general explicable by the more hygrometric state of the atmosphere, by cooking in the house, and the washing of the floors, all of which tend to increase the emanations. It is remarkable that such colours often stand a long time, and then the action of the air and the emanations commence suddenly, as in the putrefaction of organic matters. But apartments with thick coatings of such arsenical colours have a smell, even when the walls are quite dry. Sudden alternations of temperature, moisture in the atmosphere, cooking in the rooms, the exhalations and sweat of those sleeping in them, supply moisture to the walls. Recently, on one occasion, the author perceived the smell of arsenic in a perfectly dry room with a green paper, and he found, on more particuler inquiry, that the day before much electricity had been evolved in it from a strong machine. This recalled to his recollection what an inhabitant had told him, that in a green room of his, the smell was observed only when there was much thunder or lightning. According to the author's observations, also, it is very injurious for the lungs, when, even in a dry room, persons sleep so near the wall that their breath comes directly in contact with it.

Solar light appears to play a part in the decomposition of the colour; for the author found the arsenical odour always strongest in apartments with an east or south exposure, and he supposes that it is probably from the non-admission of light that those experiments have failed, which tried to demonstrate by re-agents the arsenial nature of the emanations from shut boxes lined with green paper, and kept constantly moist.

Besides the cases communicated by the district physicians, as noticed above, the author appends to his essay a number of cases observed by himself, to afford proof that, from the employment of green arseniferous pigments, cases of poisoning by them almost occur daily, and he calls attention to the yearly increase in the amount of such colours used, which are applied rather extensively, not only to paper hangings, wall painting, floor cloths, table covers, verandahs, window blinds, screens, tin plate wares, fruit baskets, sugar canisters, cans, nursery stone wares, &c. &c., but also to materials of clothing; for, according to an apothecary, M. Jonas, there are samples of green calicoes which are so covered with arseniate of chromium, that thirty yards will yield as much as half a pound of arsenious acid; so that, when a small scrap of this is burned at a candle, the whole apartment becomes filled with arsenical vapours. — *From Casper's Wochenschrift*, 27—29, 1848, *in Schmidt's Jahrbücher*, No. 9, 1848.

[Duflos in his treatise on hygiene (Die wichtigste Lebensbedürfnisse, &c.) casually alludes to the deleterious action of Scheele's green used as house paint, and mentions that in Reichenstein in Silesia, an arsenical sand has been commonly employed for making mortar, which, under the combined influence of the lime and moisture, ought, on chemical considerations, to evolve arseniuretted hydrogen, yet the families living in them preserve their health well, and therefore its effect must be trifling. We suspect that Dr Basedow has made a hobby of this subject, and is riding it rather hard.]

36.—*Typha latifolia as an Alimentary Substance.*—The *Typha latifolia*, L., and *T. Augustifolia*, L., [greater and lesser Reed mace], are well-known reeds which grow spontaneously and abundantly in many of the marshes of France, and sometimes form diminutive forests there. A recent account confirms a statement long ago made by Dr Clarke, and now forgotten, that the young shoots, soon after their development on the rhizome, are eaten with great avidity by the Cossacks, as we do asparagus, and they have been called Cossacks' asparagus. They are gathered chiefly in spring. The rhizome itself, which is large, fleshy, and feculent, is said to be eaten by the Kalmucks. As the plant grows wild and abundantly, and could be easily propagated, it might be more extensively used.—*L'Union Méd.* No. 136.

[According to Lecoq, *Jour. de Chim. Med.* iv., the rhizomes yield in the month of December about an eighth of their weight of fecula, which, with boiling water, forms a jelly like that from jalap. This starch diminishes in spring as the shoots form.]

37.—*The Fresh Water Chestnut.*—This is the fruit of *Trapa natans*, L., and was at one time cultivated in France, and extensively in Belgium. It is easily propagated by throwing the nuts into any marshy place or pond. The growth of the plant is not injurious to fish in the water. Some fine specimens were shown at a recent agricultural exhibition in France; and attention is directed to this plant as a resource in times of scarcity. In many of the departments of the west of France and of Italy, these nuts are eaten like chestnuts, roasted or boiled.—*Gazette des Hôpitaux*, No. 137.

[Though not indigenous to Britain, there seems no reason why it might not be grown here.]

38.—*Mortality among the German and Irish Emigrants to America in* 1847.—The condition of the German and Irish emigrants prior to their embarkation, and during their transit of the ocean, was in most instances conspicuously different. Whilst the former were generally robust, and well provided on the passage with the means of subsistence, and observant of cleanliness and ventilation,—the latter were in most cases enfeebled from the want of sustenance, and on ship-board, destitute of supplies of wholesome food, depressed in mind, clothed in filthy garments, and crowded and confined in air rendered pestiferous by the excrementitious matters eliminated from their own bodies. In contrasting the hygienic circumstances in which the two classes of emigrants were placed, it is easy to account for the greater amount of sickness and mortality which occurred in one class than in the other. It is said, that of the admissions of emigrants into the hospitals and almshouse of New York, the Irish exceeded the German in the proportion of about ten to one; and we are told, that the Irish in British ships suffered more than those in American.

The Montreal Immigrant Committee, in their report for 1847, state, that "in no year since the conquest has Canada presented such fearful scenes of destitution and suffering." "The year 1847 has been unparalleled for the amount of immigration to Canada; near 100,000 souls have left the British isles for these provinces the past year,—over 5000 of these died on their passage out, 3389 at Grosse Isle, 1137 at Quebec, 3862 at Montreal, 130 at Lachine, and 39 at St John's, making in all at these several places 13,815. How many have died in other sections in Canada East cannot now be known, nor, indeed, how many have perished in Canada West; but coupling all those who have perished with those who have passed into the United States, Canada cannot now number 50,000 souls of the ninety odd thousands which landed upon our shores. In sketching a retrospect of these terrific scenes, the Montreal committee forcibly remark—"From Grosse Isle, the great charnel-house for victimized humanity, up to Port Sarnia—along the borders of our magnificent river, upon the shores of Lakes Ontario and Erie, and wherever the tide of immigration has extended, are to be found the final resting-places of the sons and daughters of Erin—one unbroken chain of graves, where repose fathers and mothers, sisters and brothers, in one commingled heap, without a tear bedewing the soil, or stone to mark the spot. Twenty thousand and upward have gone to their graves, and the whole appears, to one not immediately interested, 'like a tale that is told.'"

The disease of which the emigrant passengers, and in many instances the officers and crews of ships, perished at sea, and of which a great number were ill on their arrival in the United States and Canada, was typhus in its genuine form. In some ships dysentery, small-pox, and measles swelled the amount of mortality, and added to the number of sick that reached the ports of destination.—*Trans. Amer. Med. Assoc.*, vol. i. p. 111.

LONDON: JOHN CHURCHILL, PRINCES STREET, SOHO.
EDINBURGH: SUTHERLAND AND KNOX, 23, GEORGE STREET.
FANNIN AND CO., DUBLIN; J. B. BAILLERE, PARIS;
AND ALL BOOKSELLERS.

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

FEBRUARY, 1849.

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I.—MORBID ANATOMY, PATHOLOGY, AND PATHOLOGICAL CHEMISTRY.

39.—*On the Relation of Cholera to Malarial Fever.* By Dr CHARLES W. BELL, Manchester.—The circumstances under which Dr Bell observed this disease in this country and in Persia, have been such as to impress him with the idea, that it is a variety of the malarial fevers, presenting the worst or (so called) *congestive* type of these diseases, in which the cold stage is prolonged and violent, and becomes in itself a source of danger. He describes his experience of cholera as follows :—

"After becoming acquainted with cholera, under very favourable circumstances, in Edinburgh in 1832-3, and in London in 1833-4, it was my lot to be stationed for several years in Persia, a country situated, both geographically and in point of climate, midway between India and Europe, and there I had the opportunity of observing closely the first approaches of the identical cholera which is now sweeping irresistibly towards us. The disease was there ushered in by a regular succession of epidemics, commencing in a fever appa-

rently continued, but by and by assuming more the character of a remittent, and this very gradually changed to an intermittent or quotidian type; of this the cold stage gradually became prolonged, and assumed all the appearances of an attack of cholera; and then came the cholera, as it has every where been known, without any *obvious* stages or intermission. This again in its turn disappeared, and the epidemic resumed the character of remittent and continued fever for a time. These various changes occupied a period of eighteen months."

Dr Bell thinks he has observed a remission in the collapse of cholera itself, about the eighteenth or twentieth hour from the commencement; but he does not lay much stress on this observation. The evacuations from the bowels he considers as the most usual and natural relief to that capillary congestion which is believed to be present both in this disorder and in intermittent fever. The consecutive fever of cholera is, according to the author, properly a remittent of quotidian type, which, when the disease exceeds the limit of three days, supplants the congestive form.

In this attempt to establish a relation between cholera and the quotidian intermittents, the author admits the difficulty which arises from the slight tendency displayed by cholera to continuance or recurrence. He thinks, however, that he has observed in other varieties of quotidian fevers a similar tendency to run a course of exactly three days; and indeed, from his own observation, seems disposed to regard this as a general law of quotidian intermittents.

Dr Bell thinks that most of the epidemics of cholera will be found to have been ushered in by such a course of fevers as he has described in regard to Persia; and likewise to have been attended by an epidemic constitution, in which most other diseases tend to assume a congestive type. He has been enabled to trace the progress from personal observation of it in several places between Persia and this country, and has found it to be preceded and accompanied by these characteristic forms of disease. In particular, he regards the *relapsing fever* of this country, which was first accurately observed in Edinburgh in 1843, and has ever since prevailed in various localities, as a modification of one of the forms of *precursory* epidemic observed by him in Persia.

"In 1841, a fever of remittent and quotidian intermittent type broke out in Scinde, where it destroyed many of our best troops, alternating occasionally with cholera. Both proved severe in Caratchee; it spread through Beloochistan, and appeared at Bunder Abbas in the Persian Gulf early in 1842; also at Yezd. It thence spread westward to Shiraz, and northwards towards Ispahan and Tehran, proving every where extremely fatal; but its further progress to the northwest was arrested for a time, on the high grounds of Sultanieh, by the setting in of winter. Next spring it resumed its course, overspread Aderbijan, Erivan, Georgia, and the whole shores of the Caspian, crossed the Caucasus, and was very fatal in Veronish in the centre of Southern Russia. I here lost sight of it in November 1843, but was not a little surprised to find it again in December, on my arrival in Edinburgh. It was there modified, it is true, and displayed less of an intermittent character, but was fully characterized by other symptoms, especially the tendency to relapse, and the pale tongue. Late in 1844, it appeared in Manchester, especially in Ancoats, where it was very severe. In 1845, it became epidemic in Liverpool, somewhat more modified in type, and the fever of 1846-7 in Manchester still preserved much of its peculiarities, especially in the frequency with which it was accompanied with jaundice, and in running a course of seven, fourteen, or twenty-one days, and relapsing at these intervals."

The Persian epidemics were exceedingly varied in character, so much so that it appears scarcely possible to recognise some of them as fevers at all in any ordinary sense of the word. The disease appeared as tic douloureux, or intermitting hemicrania; paralysis, general or partial; apoplectic and epileptic symptoms; shivering ague, or ague without shivering.

"By and by this form was more frequently accompanied with vomiting, purging, and cramps, so as to constitute, in every respect, an intermitting cholera; whereas others had attacks resembling cholera in every particular, except that, instead of the more usual exudation from the bowels, this took place by the abundant outpouring of the fluid of the blood from the skin, or sometimes into the cellular texture, either of whole or part of the body, producing either partial or general dropsy in the course of a few hours. This latter form was more especially frequent in infants and children. Sometimes, too, this serous exudation occurred in a form not less rapidly fatal than the worst kind of cholera, by producing suffocation, in consequence of sudden œdema of the

lungs. All these, however, and various other anomalous affections, at length gave place to cholera in its ordinary form, with vomiting, purging, and spasms, as little marked by intermission as it ever is, and differing in no respect from that I had witnessed in Edinburgh and London. Its temporary disappearance was then followed by the return of intermittent fever."

The author thinks that cases very similar to these have been occurring in Manchester since the middle of September last.

The treatment suggested by Dr Bell for cholera, as well as the whole of the affections to which he believes it to be allied, is the combination of quinine and iron, which he has found remarkably useful, not only as an anti-periodic, but in obviating congestion of the internal organs. He thinks bloodletting to be only useful when the disorder has not fairly commenced, and injurious when performed at a later period.—*Prov. Med. Journ.*, Nov. 29, and Dec. 13, 1848.

[The details of Dr Bell's experience of individual cases in the original papers are most curious and interesting; and we strongly recommend their perusal to those interested in this subject as the fruit of a large experience in cholera, in a region little known, in a medical point of view, to most Europeans. We think, however, that the author has decidedly overstepped the limits of sound induction in connecting together in one class diseases differing so much from each other as those he describes. The number of disorders which are admitted as manifestations of the precursory epidemic fevers is so great, and their kind so various, that we scarcely think it possible that cholera could at any time have invaded Persia without being heralded by some of them; and we cannot help thinking that the author has been betrayed into the recognition of analogies far too vague and indefinite when he associates apoplectic, paralytic, neuralgic, and dropsical attacks with ague, and all of these with cholera.

Suspending our judgment, however, as to the Persian epidemics, we must say, with more confidence, that we are convinced of the fallacy of Dr Bell's ideas as to the relapsing fever of this country. The epidemic of Edinburgh in 1843 presented no resemblance whatever to a fever of "remittent or quotidian intermittent type," such as the author seems to have seen in Persia; nor did it resemble a malarious fever at all, except in the single circumstance of periodical relapse; and even here there was a marked difference, seeing that the relapse was not in the slightest degree influenced by the administration of quinine, as ascertained by numerous trials in Edinburgh—(see Dr Robertson's paper, in *Monthly Journal* for November 1848). The origin of this fever by contagion was, we think, placed beyond all doubt by the researches of Dr Henderson and others—(*Edin. Med. and Surg. Journal*, 1844); and its connexion with endemic causes or with malaria cannot be said to be established, or even rendered probable.

Neither can we admit that the relapsing fever has at any period of its history shown the slightest tendency to pass into the form of cholera. We think it satisfactorily proved that it has existed in Ireland during the last half century at least—(see Dr Robert Paterson's article in *Edin. Med. and Surg. Journal*, Oct. 1848, or *Monthly Retrospect*, Nov. 1848); and during this period it has made several visits to this country, not one of which has been immediately followed by cholera. The epidemic of 1843 presented a remarkably fixed and definite character: it subsided without a trace of choleroid affection. It reappeared in Edinburgh, with nearly the same characters, in 1846-7, reached its acme without variation, and again subsided, without having ever suggested to any one, so far as we are aware, the idea of its being either cholera or quotidian intermittent. Finally, when cholera broke out in October 1848, the relapsing fever could not be said to exist in an epidemic form, and such cases of it as did occur in no way varied from the ordinary type. We think, therefore, that any supposed analogy of this fever, with intermittent on the one hand, or cholera on the other, is, so far as this country is concerned, entirely unwarranted by observation.—W. T. G.]

40.—*On the Contagion of Cholera*, by M. Swaagman, and Dr M'Cormac. In an account of the epidemic cholera of Groninguen, M. Swaagman cites the following facts, favourable to the contagionist:—1. The hospital required only two nurses, both had cholera. 2. It happened that in two large families where the mothers were the subjects of the disease, one child only of each was attacked, and in both cases it was the child that lay with the mother. 3. The disease was observed to attack a great number of members of certain families, although they lived in very different quarters of the town. 4. In a neighbouring hospital, no

case occurred until a poor traveller leaving Groninguen, and who was seized with cholera *en route*, was admitted into the establishment, where he died. Immediately afterwards several of the inmates were seized with cholera.—*Annales de la Soc. de Méd. d'Anvers*, Dec. 1848, and *L'Union Méd.*, Jan. 6, 1849.

Dr M'Cormac observes, "Without going into particulars, I have witnessed so many instances of the apparent transmission of cholera from person to person, that I cannot entertain a doubt as to its communicability. I have known it, again and again, to ensue after contact, and of those daily exposed, a much greater number sickened than of persons otherwise circumstanced. Whole families among the poor, one taking it after the other, would sicken and perhaps perish. A multitude of cases would proceed from a very few poor houses, a single lane or alley, while in habitations of persons in easy circumstances few contracted the disease, and still more rarely did it spread. I do not indeed see how the propagation of the disease is to be explained, save on the presumption of its communicability. Instances are within my own knowledge, of individuals labouring under cholera infecting the people in whose houses they had lodged, and through which they passed. At the same time the risk incurred by healthy, vigorous, temperate persons, even along with daily intercourse with the sick, is comparatively small. The circumstance of thirty-one successive cases of cholera occurring in and confined to, the Belfast workhouse, after its introduction into that establishment by a man labouring under the disease, from Edinburgh, seems sufficiently conclusive as to its contagiousness."—*Directions for the Management of Cholera, by H. M'Cormac, M.D., Belfast*, 1848.

41.—*Congenital Absence of the Globes of both Eyes.* By Dr A. B. WILLIMAN.—The subject labouring under this singular deformity, was presented to Dr Williman's notice a few months past by her owner, Dr Mazyck, at his plantation on the Santee river. She is about nine years of age, the last child of a black woman who has reared a remarkably fine and healthy family, and presents in this relation an exception to that law of hereditary transmission which establishes resemblance between parent and offspring, and most evidently observed in the features of the countenance. At birth the infant was seen by Dr Mazyck, and in a few days after by Dr James Moultrie, and these gentlemen give the following information in relation to the case at that early period. Nothing unnatural was observed in the appearance of the face, except the firm adhesion of both eyelids on their respective sides when the attempt was made for the first time to open them. As the child appeared to suffer slight pain, no violence was used, and at the end of a week or ten days there occurred a spontaneous separation for a few lines distance along the tarsal margins; very gentle force exercised with the fingers soon completed the rupture of the remaining adherent portion, and the result disclosed the absence of the globes above mentioned. Ever since the period here alluded to (about two weeks after birth), the eyelids have remained separated, and we may state from further recent examination, that these appendages, which are perfect in their formation, and furnished with puncta and eyelashes, are lined as usual with a healthy conjunctiva. This membrane, extending throughout the entire inner surface of the orbit, was reflected rather firmly over a more resistant tissue deeply situated (perhaps the rudiments of a sclerotic coat), although beneath this no protrusion was visible, and a probe passed over its surface could detect no openings. The existence of the orbicular muscles is evident, as their contraction rather inverts than elevates the lids, from the want of that point or fulcrum which is afforded by the globes in their normal state. It seemed also clear, after an examination of several days, that in both cavities there existed the secretion of a fluid resembling the tears, the lachrymal gland being in its normal position, and easily felt by slight pressure. The orbitar margins are well developed below, but at their superior external portion appear somewhat deficient, giving to the superciliary ridges a slightly depressed form, and to the whole forehead a contracted character, often observed in persons deficient in intelligence. The girl, however, with the loss of the most important of the organs of sense, manifests a singular degree of intelligence in many others. Her disposition is cheerful; hearing is quite acute; and she possesses a remarkable power of distinguishing bodies by the touch, although not to that extent, as has been pretended, of forming ideas of colour in this manner.—*Charleston Medical Journal.*

42.—*On Sanguineous Perspiration.* By Dr SCHNEIDER. It has often been a question whether, under any circumstances, blood is ever mixed with the fluid of perspiration in human beings. Dr Schneider remarks that he has several times observed

the phenomenon. He mentions having been once summoned to a healthy man, fifty years of age, who, for a period of twelve hours in succession, had travelled on foot: during the journey he had perspired much in his feet; and, on examining them at the end of it, they were found covered as high as the ankles with a sanguineous perspiration, which had also soaked into and stained his stockings. In another case of a healthy young man, Dr S. mentions having noticed that, after a violent exercise, the perspiration beneath the arms was of a bright red colour; and he quotes a similar case from Hoffman.

In proof that the perspiration over the whole body may also be of a sanguineous character, he mentions one case in which it had been observed in a delicate man after copulation, and then quotes the following still more remarkable case from Paulini. While surgeon on board a vessel, a violent storm arose, and threatened immediate destruction to all. One of the sailors, a healthy Dane, thirty years of age, of fair complexion and light hair, was so terrified that he fell speechless on the deck. On going to him Paulini observed large drops of perspiration of a bright red colour on his face. At first he imagined the blood came from the nose, or that the man had injured himself by falling; but, on wiping off the red drops from the face, he was astonished to see fresh ones start up in their place. This coloured perspiration oozed out from different parts of the forehead, cheeks, and chin; but it was not confined to these parts, for, on opening his dress, he found it formed on the neck and chest. On wiping and carefully examining the skin, he distinctly observed the red fluid exuding from the orifices of the sudoriparous ducts. So deeply stained was the fluid, that on taking hold of the handkerchief with which it was wiped off, the fingers were made quite bloody. As the bloody perspration ceased, the man's speech returned; and when the storm had passed over he recovered, and remained quite well during the rest of the voyage.—*Casper's Wochenschrift*, 1848, and *Medical Gazette*.

II.—PRACTICE OF PHYSIC.

43.—*On Acute Muscular Rheumatism and Rheumatic Inflammation of the Joints.* By Dr G. Corneliani of Padua.—Since Bouillaud pointed out the connection between the endocardium and the blood-vessels in acute articular rheumatism, Corneliani has specially examined the walls of the vessels, and has found that in a great number of cases, not only do the sero-fibrous sheaths of the muscles and joints, and the endocardium and pericardium, present signs of inflammation, but that similar signs are shown in the coats of the arteries. And even he is inclined to apply the terms *artero-arthritis* and *artero-myositis* to these diseases, although he does not mean that there is always a true *arteritis*, the condition being frequently limited to a high degree of irritation, or a state of active hyperæmia. He endeavours to explain the connection between articular rheumatism and the inflammation of internal organs, by the assumption that the inflammatory process, which is first developed in the heart and vessels, has a natural tendency to localize itself wherever there are sero-fibrous membranes. He points out that the thick and firm buffy coat on the blood is a strong argument in favour of the inflammatory character of the disease. This is always more marked than in other rheumatic inflammations, and continues to exist after the muscular and articular pains have ceased, and seems closely connected with the febrile disturbance of the system.

Another symptom of great importance is the rheumatic inflammation of the muscles (especially those of the loins, abdomen, and thigh), which so readily terminates in suppuration. This tendency seems to indicate the existence of an artero- or phlebo-myositis (!) rather than simple myositis, just as we find that suppuration of the lungs or liver almost always depends on *artero-pneumonitis* or *artero-hepatitis*.

The arthralgic form occurs also in some exanthematous diseases (smallpox, scarlatina, and miliary fever), whose inflammatory character proves (!) that they depend on sub-inflammatory irritation of the blood-vessels. Gouty inflammation of the joints—an obstinate affection prone to recur—in like manner depends on a torpid inflammation of the vessels. Finally, we often meet with pain in the joints in chlorosis, the cause of which must be sought in a similar condition of the vessels.

The inflammatory nature of acute rheumatism is further proved by the fact of its being induced by atmospheric causes, like the rheumatic and catarrhal inflammations of the internal organs. Whatever be the source from which we would derive the affection—whether we refer it to electricity

or to suppressed transpiration, &c.—a morbidly increased reaction is undoubtedly established in the vessels, by which they become predisposed to inflammation, while their relations to the cutaneous system are deranged. An increased irritation of the vascular system, and the sero-fibrous membranes, is the result of this morbidly heightened vitality, which is manifested either as a vascular active hyperæmia, with increased sensibility of the affected parts, or else it gives the impulse to a true inflammation. Finally, in the examination of the dead body, we find the lining membranes of the arteries reddened, thickened, or softened, and we meet with serous effusion on the pericardium, and plastic exudation on the aortic valves, and under the inner membrane of the arteries. All these circumstances show how close a connection exists between acute articular rheumatism, and between inflammation of the endocardium and of the lining new membrane of the arteries.

The inflammatory character of the disease is, according to the author's view, distinctly shown by the nature of the most successful of the remedial agents employed. These he reduces to five.

1. Antiphlogistic means (bleeding and purgatives) by Sydenham, and subsequently by Boerhaave, Pringle, Baglivi, Cullen, Brown, and more recently by Fouquier, Raciborski, Boullaud, Pelletan, and Chomel, are highly commended by the author. He especially deprecates hesitation in having recourse to repeated venesection, where the endocardium and the great arterial trunks are already attacked by inflammation; and considers that its use is strongly indicated where, in consequence of arteritis, there is contraction of the left ventricle of the heart and of the arteries, and where the impeded circulation induces congestion in the internal organs. He considers that, in the young and plethoric, no radical cure is possible without a decided antiphlogistic treatment. He has found leeches superfluous or even injurious in vague and wandering articular rheumatism, although they may be useful where the pain is fixed in one or two joints. Our author does not very strongly advocate the employment of venesection where the inflammatory process has, as he observes, only attacked the extremities of the vessels, and has not advanced to their large parts or to the endocardium, preferring the repeated application of leeches. He considers that purgatives aid the beneficial effect of bloodletting.

2. Laennec and many later physicians recommend *tartar emetic*, and this the author has found most efficacious where inflammatory irritability of the stomach and intestinal canal, or of the mucous membrane of other organs, or cutaneous eruptions, are associated with rheumatism. He gives from six to ten grains in solution during the twenty-four hours; and is of opinion that its use is only contra-indicated where strongly marked gastro-enteritic symptoms are present. The author questions the action of this remedy in producing copious perspiration, or increasing the intestinal discharges. According to his experience, its effect is rather to diminish the cutaneous action, and lessen the quantity of the excretions; but its employment is, nevertheless, found to be successful.

3. Nitrate of potash has been given by the author with the most satisfactory result in rheumatic affections of the joints; and he has never observed that it exercised any injurious effect on the urinary passages.

4. The author considers that he has succeeded in effecting many strongly marked cures by the use of *Colchicum vernale* (which he regards as much more powerful than the *C. autumnale*) when all other means had failed. The general depression with which its use was attended, was speedily removed by the employment of excitants and stimulants. He prescribes it in the form of a syrup.

5. The author fully confirms the experience of Mojon regarding the efficacy of di-sulphate of quinine, which he considers the sovereign remedy in *Rheumarthritis*, but less decidedly efficacious in rheumatic inflammation of internal organs, and of the sheaths of nerves. He has found it extremely useful in typhus, puerperal fever, and chlorosis, where a sub-inflammatory condition of the arterial and venous system predominated. The author finds that, since he has employed quinine in rheumatic affections of the joints, he has more rarely been obliged to have recourse to general bloodletting. He has also observed fewer relapses. The injurious effects ascribed by some to its use (as cerebral congestion, &c.), our author believes to be referable either to an over-dose of the remedy, or to certain conditions peculiar to the disease, rendering this an unsuitable remedy.—*Annal. Universali, March* 1847.

[The great aim of the author is to prove that rheumatism is an inflammatory disease. Were such a proof necessary, we cannot think he has added much to the information we previously possessed on the subject. We have selected it from several

other papers, with the view of illustrating the present state of medicine in Italy.]

44.—*On a peculiar Obstruction of the Bowels.* By DANIEL DONOVAN, M.D., of Skibbereen.

[Four cases have been seen by the author of an affection so curious and anomalous, that we give his own narrative.]

Patrick Hanley applied at the Skibbereen Dispensary on the 23d inst. He was then labouring under severe tenesmus and bearing-down pain; and, to use his own words, "had a bowel complaint on him for four days, and could *pass nothing but red blood.*" He further stated that "he could make no water, and that there was a lump in his seat."

This description of his disease, and the fact that my attention had been directed to the subject by my friend Dr Fitzgibbon, who detailed the particulars of two similar cases that occurred in his practice a few days before, led me to make an examination, and I discovered at the orifice of the gut a large solid mass. The parts around the anus were puffed out, and the sphincter was distended to the utmost.

It was evident that mechanical means could alone relieve the sufferer; and on using the handle of a pewter spoon for the purpose, a large quantity of consolidated potato skins, with some portion of the substance of the tubers and coarse Indian meal, was dislodged. The retention of urine was immediately removed, and the other symptoms relieved, but recurred, and required for four successive days the same treatment, together with the administration of large enemata of warm water, which assisted in bringing down and breaking up the firm mass that filled the intestine.

These concretions are almost entirely formed of potato skins, and are consequent on the use of diseased tubers, in which the peel and farinaceous substance of the potato are so intimately blended together, that it is impossible to detach the former in the ordinary way; and large quantities of the skins are consequently swallowed, and accumulating in the bowels, form the obstructing masses that I have described.

It is of much importance that a correct diagnosis should be formed in this disease, as, from the similarity of some of the symptoms, it may be confounded with dysentery, and lead to very unavailing or even mischievous treatment.

The straining at stool, the evacuation of blood from the ulcerated lining of the rectum, and the retention of urine that may be mistaken for suppression, are all symptoms which are exhibited by the malignant dysentery that has raged for the last two years, and may lead to an incorrect diagnosis of the disease that I am alluding to; but there is one diagnostic character that, once observed, cannot be mistaken, and which clearly points out the nature of this complaint —I allude to a very peculiar sour smell from the body of the patient, like that exhaled from fermenting potato skins, —a substance used by weavers in the manufacture of coarse linens. Whenever this smell is recognized in cases exhibiting the other symptoms that I have described, an immediate examination of the rectum should be made, and mechanical means should be immediately employed to unload the gut, as any other plan of treatment would be perfectly useless.

A similar species of obstruction was very common in the autumn of 1846 from the use of boiled wheat.—*Dublin Med. Press*, Nov. 8, 1848.

45.—*Illustrations of the Results of Pleximetric Percussion.* By M. PIORRY (Hôpital de la Pitié).

[It is well known that M. Piorry insists strongly on the necessity of accurate percussion as a means of diagnosis, and in particular on the limitation of organs, by marking out their boundaries on the surface. The following cases are adduced, in one of his late clinical lectures, as evidence of the successful employment of this method :—]

1.—A woman, aged sixty four, was seized with stitch in the side, general lassitude, dyspnœa, fever, and difficult expectoration. Five days after the commencement of the symptoms the expectoration was purulent, like that of the last stage of phthisis. One portion of the right lung was marked out as partially dull on percussion, without increased resistance communicated to the percussing finger; here there was crepitant râle, indicating the congestive stage of pneumonia. Over a second portion the percussion was quite dull, the vocal resonance increased, the respiration bronchial, and the resistance to the finger such as to indicate a perfectly condensed lung. In a third portion the dulness of percussion continued, and on auscultation there was

gurgling. There the lung was in the stage of suppuration, and hence the purulent expectoration. The patient was bled. The blood had a buffy coat, and this contained numerous opaque yellow granulations, of the size of a hempseed, which are believed by M. Piorry, in this and similar cases, to result from the reabsorption of pus. In this state of the system, M. Piorry deprecates further bleeding. He gives good diet, and places his trust in the administration of tartar-emetic. The prognosis, however, is grave.

[In this case the diagnosis of suppuration of the lung, as opposed to softening tubercle, appears to depend, not on percussion, but on the recent origin of the symptoms and rapid course of the disease. The following observations are more illustrative of the results of M. Piorry's practice.]

2. A man, aged forty, was attacked eight days before admission with stitch in the left side and dyspnœa. Dulness on percussion was present at the lower part of the left side, with absence of respiratory murmur, and œgophony at the upper limit of the dulness; these signs indicated a pleuritic effusion. As the dulness, however, occupied the situation which would have been assumed by an enlarged spleen, M. Piorry applied the following test, founded on the power which he ascribes to quinine of diminishing the volume of the spleen. He gave the patient a dose of quinine, having previously marked out the limits of the dulness, and on percussing again some minutes afterwards, found it unchanged, from which he concluded that the spleen was not at all involved in the disease.

3. A vigorous high-complexioned man complained of extremely laborious respiration and pain in the region of the liver. The veins were full of blood; and percussion showed the heart to be large, and the liver enormous. There was slight fevernishness, but no other sign of disease. The man had been in the habit of being bled annually.

It was evident that the circulation was overloaded, and the heart and liver in particular gorged with blood. Venesection was performed for the relief of the plethora.

After twelve ounces of blood had been removed, decided relief was experienced. Immediately after the bleeding, a decided diminution of size was observed on percussion of the heart and liver. The latter organ had retired from its upper limit by four-fifths of an inch, and by somewhat more than this from its lower limit. Had this reduction of size been insufficient, M. Piorry would not have hesitated to push the bleeding further. [The above use of percussion is worthy of more attention than it has generally received in this country.]

4. On the eighth day after delivery, a woman began to complain of abdominal pain; in the evening she had shivering, followed by an accession of fever. There was a suspicion of puerperal fever. It was found, however, by percussion, that the colon was loaded with fæcal matters, and with gas; and that the spleen was enlarged so as to measure four inches from above downwards. It appeared also that she had received, some days before her confinement, a blow on the left hypochondriac region. M. Piorry, judging according to his well-known principle of the constant enlargement of the spleen in intermittent fever, at once referred the woman's symptoms to an attack of this kind. The indications of treatment were to unload the bowels, and to reduce the size of the spleen by quinine.—*Gazette des Hôpitaux*, Dec. 24, 1848.

46.—*On the Configuration of the Chest in Emphysema, as compared with that in Health and in other Chest Diseases.* By FRANCIS SIBSON, M.D.—The form of this chest in health is distinguished from that in emphysema by this—that its symmetry is not altered by any excessive or partial development. The upper part of the chest, in form, is neither raised nor brought prominently forward. The neck is long, not short; the shoulders are sloping, not elevated; the clavicles are oblique, not square and forward, and elevated at their sternal end; the curve of the dorsal and cervical vertebræ is normal, not excessive; the dorsum is gently convex, not rounded and prominent, especially over its lower portion; the intercostal spaces are wide above and narrow below, not narrow above and wide below; the angle formed between the seventh costal cartilages below the sternum, is a right, and not (as in emphysema) an acute angle.

The form of the chest, in considerable narrowing of the larynx or trachea, with consequent obstruction to respiration, is distinguished from that in emphysema by its being narrow, flattened, and elongated, instead of being rounded, prominent, and deepened.

The form in phthisis is distinguished by the walls of the chest being flattened, in-

stead of prominent, over the seat of the disease.

The form of the chest in extensive heart disease differs from that in emphysema, in that the cartilages and ribs over the cardiac region are much more prominent than the corresponding cartilages and ribs on the right side, instead of being nearly equal to them.

In abdominal distension, the general configuration is exactly the reverse of that in emphysema: instead of the chest being full above and somewhat depressed below, and the abdomen being hollow just below the xyphoid cartilage, the abdomen is tense throughout, the lower end of the sternum and the lower portion of the chest are full and prominent, and the upper part of the chest is flat and narrow. —*Med. Gaz.*, Oct. 27, 1848.

47.—*On Vomiting and Diarrhœa in the Early Stage of Fever.* By Dr GRAVES. — Every fever which commences with vomiting and diarrhœa, whether it be scarlatina, or measles, or typhus, is a fever of a threatening aspect; and in all such fevers the practitioner should be constantly on the watch, and pay the most unremitting attention to the state of the brain. There is much difference between the vomiting and diarrhœa of gastro-enteritis, and this *cerebral diarrhœa and vomiting*. The latter sets in generally at a very early period of the disease, perhaps on the first or second day, and is seldom accompanied by the red and furred tongue, the bitter taste of the mouth, the burning thirst, and the epigastric tenderness which belong to gastro-enteric inflammation.

There is another source of diagnosis, founded on the results of treatment. Gastro-enteric vomiting and diarrhœa are relieved by leeching the belly, a mode of treatment that has no effect on the vomiting and purging produced by cerebral disease. There is also another means of distinguishing:—the vomiting and diarrhœa which result from gastro-enteric inflammation, are never accompanied by such copious discharges of bile as when they depend on disease of the brain. In diarrhœa from derangement of the brain, the quantity of bile passed is very remarkable; and it is equally curious, that when vomiting follows derangement of the cerebral circulation in ordinary cases, and without fever, bile is thrown up in very large quantities. This is frequently observed in cases of sea-sickness, when a larger quantity of bile is vomited than could occur from mere gastric irritation.—*Graves' Clinical Medicine*, 2d ed. vol. i. p. 69.

48.—*On the Clinical Detection of Iodine.* —It may be often of service to determine when certain medicinal substances have penetrated into the system; and, as regards iodine, M. Rayer adopts a very simple procedure at La Charité. A strip of starched paper is moistened with the saliva or urine of the patient, and is then touched with nitric acid, with the effect of producing a more or less intense blue. As regards the urine, however, if the proportion of iodine employed has been very slight, the fluid requires to be evaporated to a 15th, 20th, or more of its volume. So treated, M. Rayer has detected iodine in the urine of a patient in whose case a simple iodine injection had been but once thrown into the knee-joint.—*Bul. de Thér.*, tom. xxxv. p. 410; and *Brit. and For. Med. Chir. Rev.*, Jan. 1849.

49.—*On the Relative Strength of the Vocal Vibration in different parts of the Body.* By M. MONNERET.—The right side of the chest vibrates far more strongly than the left; and the following is the order in which the intensity decreases in the various parts. 1. The larynx and the trachea, as far as the sternum. 2. The four last cervical, and four or five first dorsal vertebræ. 3. The right sub-clavicular and sterno-mammary regions. 4. The same on the left side. 5. The space comprised between the spinous processes of the cervical and dorsal vertebræ and the inner edge of the scapula. 6. The posterior and lateral regions. 7. The sternum and supra-spinal fossæ. 8. The anterior and inferior parts, *i. e.* the præcordial and hypochondriac regions. The thorax is not the only part which transmits this vibration freely, for it is felt along the whole dorsal and part of the lumbar spine. Its intensity is very great at the head, especially the sinciput. The vibration is diminished if the chest is covered with thick muscles, or if there be deposits of fat or serum, and is very feeble in the mammary region in women. In those who have long thin chests, or who have fallen into a state of marasmus, it is very perceptible.—*Rev. Med. Chir.*, vol. iv.; and *Brit. and For. Med. Chir. Rev.*, Jan. 1849.

III.—PRACTICE OF SURGERY.

50.—*Strangulated Inguinal Hernia returned en masse by Taxis; Patient saved by an Operation.*—Dr Homolle details a case of hernia in which the tumour had been returned into the abdomen by the patient himself. The reduction was followed by symptoms of strangulation; and, notwithstanding all efforts of coughing, &c., the tumour could not be again made to descend into the canal. On the evening of the second day from the return of the hernia, the symptoms became urgent, and M. Robert was called in consultation, when an operation was agreed on as the only chance of affording relief. M. Robert proceeded to operate, and the following are the details of the operation:—"An incision was made through the integuments of the abdomen about 3½ inches long, nearly parallel to the ligament of Fallopius, and extending to just below the inguinal ring. The aponeurosis of the external oblique was divided along the whole extent of the external wound, and the finger was passed into the abdomen behind the inguinal region; by pushing aside the fibres of the internal oblique and transversalis, and by pressing back the peritoneum and the loose cellular tissue uniting it to the anterior abdominal parietes, M. Robert hoped to find the sac in the iliac fossa, and immediately behind the superior orifice of the inguinal canal, as had happened to him twice already under similar circumstances; but there was no appearance of it. After a long and painful search, we found the tumour behind the external border of the rectus muscle. It was rather glistening in appearance, and very moveable. M. Robert tried several times to seize it with the forceps and draw it out; but the very loose cellular tissue covering it, either escaped each time from his hold, or was torn without being drawn down. At length, however, after fits of coughing, which the patient courageously kept up for some minutes, it was enclosed slightly between the lips of the wound.

"M. Robert then divided the sac; it contained, along with a little serous fluid, a large and very red knuckle of intestine, and a pretty large mass of omentum in front of it. The sac was drawn out as far as possible, and freely opened with scissors guided along the index finger, and so by degrees the seat of strangulation was reached, and divided likewise. Whilst Dr H. fixed the two lips of the sac outside by means of forceps, M. Robert endeavoured to return the intestine, which was accomplished with difficulty, and after some considerable time. The inflamed state of the omentum forbade its being returned; it was left out, and abandoned to the chances of suppuration and mortification, which generally overtake it in such cases. The dressing was very simple; a piece of linen, pierced with holes, was placed over the omentum, which was hanging between the lips of the wound; then a few pledgets of lint and a spica bandage. Ordered him a draught of syrup of peach blossom and castor oil, twenty grammes of each. He had a good night, no fever, got some sleep, and passed several watery stools. On the 9th of January the dressing was raised: there was a laudable and abundant suppuration. From this time the wound was dressed every morning; the omentum continued to suppurate and diminish in bulk. At the end of three weeks the wound was only two inches in extent; the digestive functions were perfectly re-established. After the sixth week the patient was able to be up; and at this day he walks about as well as ever, and experiences no inconvenience from the hernia, which is kept up by a bandage."—*L'Union Méd.*, Nov. 23, 1848.

[This case is interesting in more than one point of view; but we think it especially so, as directing attention to the question of operating in similar cases. The opinion very generally held hitherto on this subject has been—that where symptoms of strangulation follow the reduction of hernia by taxis, and where the tumour cannot be made to re-appear by coughing or other expulsive efforts, that the cases are similarly circumstanced to those of internal strangulation from other causes; and the opinions as to the propriety or otherwise of operative interference, have varied according to the views held regarding the general question of the propriety of gastrotomy.

But we believe that it can be shown, that this opinion as to the analogy between these two classes of cases, has been too hastily assumed; and, without offering any opinion as to the propriety of gastrotomy for internal strangulation, or in

cases of intus-susceptio, we would merely point out, that cases like that of Dr Homolle's patient differ materially in some respects from such internal strangulations or obstructions; and that the points of difference are of such a nature as to show the propriety of operating on the same general principles which warrant us in doing so in ordinary cases of strangulated hernia. The principal objection to operations in cases of internal strangulations, is the uncertainty—both as to the situation and nature of the obstruction—so that the surgeon may find, after opening the abdomen, that he either cannot ascertain or reach the seat of constricted or obstructed portion of bowel, or that, having found it, he cannot, from its very nature, relieve it by operation. But in cases where strangulated hernia is reduced *en masse* by taxis, there are two points which appear to us as obviously indicating the line of practice. The first is, that in such cases the strangulation can scarcely arise from any but one cause, viz., constriction by the neck of the sac; and the second, which follows from the first, is the comparative fixity of position of the hernial mass, owing to the connexions of the peritoneal sac; for when we reflect that the sac is formed by the parietal peritoneum, we at once see, that though the tumour be pushed back through the canal, it cannot be very far removed from its original position with regard to the internal opening, and that it will thus be retained within the reach of surgical interference; so that, whilst an operation affords the patient the only chance of relief, we have the advantage of a degree of certainty, both as to the position of the strangulated intestine and as to its cause; and for these reasons we consider operation in such cases not only warrantable but imperatively demanded; and the successful results of M. Robert's operation will, we trust, lead to its general adoption.]—J. S.

51.—*On the Employment of Sugar of Lead in Strangulated Hernia.* By Drs NEUHOLD and HASSERBRONC.—The use of sugar of lead enemata for reduction of strangulated hernia, was first recommended by Neuber and Seitl; it has recently been tried by Drs Neuhold and Hasserbronc. Dr N. affirms that operations would become very rare were this agent more extensively used:—he states that in his experience of its effects, he has always met with success, and that he has given four to six enemata, each containing ten grains, of the acetate of lead, without bad results. In a case of a very large scrotal hernia, which had resisted the taxis and all other means for twenty-eight hours, and the patient refusing to consent to an operation, ten grains of the acetate of lead dissolved in six ounces of tepid water were given as an enema, and this was to be repeated every two hours. The pulse, which was small and contracted, gradually became more developed, the general condition hourly improved, and the hernia spontaneously returned while the man was asleep. In another case of inguinal hernia, Dr N. was not called till strangulation had lasted three days, and had given rise to the worst symptoms. The patient's condition improved much after the use of the enema, and the hernia readily yielded to the taxis.

Dr Hasserbronc has tried it, and with complete success; the following are the circumstances of the case:—In the month of September 1848, Dr H. was called to visit Michael Th——, a basket-maker, about sixty years old, to reduce a large inguinal hernia of the right side. The patient had already made several ineffectual attempts to reduce it, but he only rendered the tumour more painful. Constipation was present, hiccough, and strong agitation. Dr H. tried the taxis, emollient enemata, cold applications to the tumour, and other usual means, without success: the strangulation had already lasted thirty-six hours. He was going to request a consultation for the purpose of advising an operation; before doing so, however, he determined to try sugar of lead enemata, forty grains to twenty-four oz. of warm water for four enemata; two every two hours; at the same time he ordered cold applications of strong sugar of lead to the tumour: after the third enema Dr H. again tried the taxis, and was able to reduce the hernia. He ordered immediately an ounce and a half of castor oil; the patient had several stools during the night without suffering any bad effects: two days after he resumed his usual business. Though not altogether sharing in M. Neuhold's hopes, Dr H. believes this remedy will play an important part in the treatment of strangulated hernia, and that it will advantageously supplant tobacco enemata, which are not free from danger.—*L'Union Médicale*, Nov. 30, 1848.

52.— *Certain Kinds of Sanguineous Tumours, and a New Mode of Treatment.* By M. PETREQUIN (of Lyons).—After having pointed out the sanguineous tumours most generally known, the author describes another kind, to which he particularly directs attention. We subjoin his description:—"There is," he says, "another kind of sanguineous tumour, often erroneously confounded with the erectile tumours, to which, however, it bears only a very distant relation. It arises and is developed in the subcutaneous cellular tissue, and not in the skin. It consists of a cavity, either simple or cancellated, deeply imbedded in the thickness of the tissues, and to all appearance unprovided with a distinct membrane, which character, in the absence of others, would be sufficient to distinguish it from cysts. It contains liquid blood, in colour and appearance venous, which is placed in immediate contact with the deep surface of the skin, which it elevates. This last, putting aside the redness it owes as much to the blood which it covers as to its own capillary vascularity, usually retains its appearance and texture; sometimes, however, the redness becomes very deep, and the skin itself is distended, of a glistening appearance, extremely thin, and very much softened, loses entirely its normal aspect, and contrasts strikingly, owing to its new appearance, with the neighbouring parts with which it is continuous. In some cases the tumour appears to redden and swell up like an erectile tumour, when you cause a flow of blood into the parts. Always soft, and fluctuating freely, these tumours increase slowly, and are recognised with tolerable facility: in a doubtful case, a puncture with an exploring trocar will decide the diagnosis. They may be situated on all parts of the body, but they appear to have a sort of preference for the forehead. This seat of predilection in an exposed part, liable to blows, to frequent cold, in a region where the skin is separated from the solid bone merely by a thin layer of cellular membrane, would lead to the belief that contusion is not altogether removed, perhaps, from their formation. However, we must acknowledge that we have never been able to discover the smallest circumstance that could put us on the track of their etiology." The treatment successfully used by M. Pétrequin for these tumours is the injection of citric acid. The operation is very simple, as may be judged from the following passage:—"The 17th April 1847, I plunged a small-sized trocar into the tumour at its dorsal aspect, withdrew about a third of the blood contained in it, which was replaced by a concentrated solution of citric acid. At the end of a month and a half the cure was completed. Compression had been employed to assist the resolution."—*L'Union Médicale*, October 1848.

53.—*Resection of the Os Femoris for an improperly treated Fracture.* By G. V. DORSEY, M.D.—J. S., aged twelve, was brought to me in the latter part of March 1847. About four months previous to that time he had fractured the left thigh-bone, near the lower point of the upper third of its length; the fracture was obliquely downwards from without inward, the lower fragment riding over the upper and overlapping it extensively. Although an apparatus had been applied at the time of the accident by a country physician, the fragments had never been reduced to their proper place, but had become united by a very large callus, standing out prominently and appearing through his clothes; the lower part of the thigh appeared to form an obtuse angle with the upper portion, and when he supported himself on the sound limb, the foot of the fractured leg seemed to pass naturally quite across to the right of the sound one, leaving the heel at the distance of five and a half inches from the ground, nor could he, when standing erect, bring it any closer. Walking, except by means of crutches, was, of course, impossible. On examination I found the callus hard and solid, appearing to fill a considerable space between the overlapping but separated ends of bone, which were quite too firmly fixed to be forced asunder except by actual division of the osseous junction. The patient was anxious for relief, and declared himself willing to submit to any operation which would restore the use of his limb, and remedy to some extent the existing deformity. After mature reflection, and examination of all the authorities I could command on the subject, I proposed to him to divide the callus by sawing it through, thus separating the bones, and afterwards to draw them to their proper place by a force sufficient to produce the requisite lengthening of the limb.

Accordingly, the operation was performed on the 11th April 1847. The patient being placed on a table, I divided the integuments on the outside of the vastus externus muscle, from below the trochanter major, about six inches directly down the limb; and separating them from the mass of callus sufficiently to introduce a sharp-pointed saw, I was enabled, in a few minutes, completely to divide the im-

mense mass, leaving a portion, of course, attached to each fragment; then, by means of a small chain saw, hooked around the bones, I succeeded in removing about one-fourth of an inch, or perhaps rather more, from the end of each bone, thereby forming a surface readily disposed to unite. Very little blood was lost, and this part of the operation was remarkably well borne. He was now placed on the mattress, and the proper extension and counter-extension applied. Here great force was required, and several strong assistants were found necessary at each point, in order to reduce the displaced fragments.

The pain was so great that the patient had every appearance of approaching syncope, much to the alarm of his friends, who thought him dying; however, by steady continuance of the power, the contracted muscles gave way, the proper length of the limb was obtained, and the ends of the bone accurately coaptated.

The case advanced favourably. Between the eighth and ninth week the patient was permitted to get up; the leg was firmly united, the deposition of callus was very great on the outer part of the limb, as no pressure could be applied to this part, and the back part of the thigh was perfectly flattened by long pressure on the mattress, there being no callus formed on this part. The large lump of callus on the outside produces rather an unpleasing appearance, but the leg is straight, shorter only by three-fourths of an inch than its fellow, and perfectly strong, supporting the weight of the body, and enabling the patient to walk without any artificial support. The knee-joint, which had not recovered its flexibility up to the time of the operation, from the former confinement, is still, after the lapse of nearly a year, considerably stiffened, but it is improving, and does not materially interfere with locomotion.—*Western Lancet*, May 1848, and *Charleston Medical Journal*, July 1848.

54.—*Neuralgia of the Urethra.*—M. Child describes a case of this affection. The patient, a man aged twenty-six, had contracted gonorrhœa three years previously. Since this time he has never been free from pain, and occasionally there has been a white gluey discharge. There was no stricture. He was ordered a mild saline aperient, with ten minims of vin. colc. in each dose. This appears to have had little or no effect, for four days afterwards. Nitrate of silver was freely applied to the urethra. This afforded much relief, and the application was repeated three or four times. The following mixture was then ordered :—℞ tr. lyttæ, ʒi.; tr. ferri sesquichlor. ʒij; quinæ disulph. gr. xii; acid. sulph. dil. ʒi; aquæ distill. ʒiv.; m. cap. ʒi ter in die. A pill, containing four grains of extract of conium and a quarter of a grain of muriate of morphia, to be taken every night. In five weeks he was perfectly relieved.—*Medical Times*, vol. xix. p. 143.

55.—*Perforated Scarificator for Stricture of the Urethra.* By Professor Bonnet.—M. Bonnet describes an instrument which he has found very useful in some cases where it was necessary to make incisions in obstinate and very much contracted strictures of the urethra. It consists of a middle-sized catheter with a bulbous extremity; in this bulbous extremity there is contained a lancet, itself the continuation of a small tube which passes through the catheter, and by means of which the lancet may be made to project beyond the bulb. Through this latter tube a very small sound or rather a wire passes. This conducting wire is passed through the stricture by means of a small gum-elastic catheter, open at both ends, which is then withdrawn, the wire being left in the urethra. The instrument is now guided upon the wire until its bulbous extremity is arrested by the stricture; when the lancet point having been made to project, it is pushed along the wire so as to cut through the stricture.—*Gazette des Hôpitaux*, Oct. 1848.

56.— *Gonorrhœal Ophthalmia.*— Dr Hairion of Louvain points out in gonorrhœal ophthalmia a symptom, according to him constant and invariable, namely, the existence of a small raised, oval, subcutaneous tumour, painful on pressure, situated in front of the ear on the affected side, and caused by an enlargement of the lymphatic glands. The clinical experience of M. Kerst of Utrecht has shown, on the contrary, that this symptom is not by any means constant, as the professor of Louvain believes it, and that, consequently, it has not the pathological importance that the latter has assigned to it. M. Kerst, moreover, states, that he has inoculated with the matter of a gonorrhœa the eye of a dragoon affected with pannus, and that he has thus developed a purulent ophthalmia, without the bubo in front of the ear showing itself.—*L'Union Médicale*, Oct. 1848.

57.—*New Method of Treatment of Urethral Pains following Gonorrhœa.* By M. Vidal (de Cassis).—After stating the frequent occurrence of severe per-

sistent pain in the course of the urethra, after all traces of discharge have completely ceased, M. Vidal mentions, that, having frequently remarked that the pains were relieved by pressing the penis with the fingers, he was led to the idea of treating these cases by compression, and has found the plan useful, affording a perfect cure in many cases, and a marked alleviation in others. The operative procedure, says M. Vidal, is so simple, that it is scarcely necessary to mention it. "The surgeon takes a long strip of diachylon plaster, one centimetre (two-fifths of an inch) in breadth, and rolls it around the penis in the same manner as a common bandage, beginning at the glans; or, still better, he may apply it more accurately by using a number of small strips of plaster, each of which shall only be sufficient to encircle the organ once, and the two extremities of each strip should be made to cross upon the urethra, for the purpose of insuring the firmness of the dressing. The principal point to be attended to is the degree of compression, which ought to be as firm as possible, without interfering with micturition, which would, of course, necessitate the removal of the dressings. The compression should be continued for a considerable period after the cessation of the pains, to prevent their return." M. Vidal cites two cases, from amongst a great number which he has treated, in favour of this mode of practice.—*L'Union Médicale*, Oct. 7, 1848.

IV.—MIDWIFERY, AND DISEASES PECULIAR TO WOMEN.

58.—*Influence of the Mother's Imagination upon the Production of Monstrous Children.* By Dr BURDON.—It is a fact, that the workings of a strongly excited mind may produce very great changes in the body, either immediate or remote; but it may at the same time be observed, that this power of the mind is circumscribed within a limited circle, even within its own body. It may be felt in the several tissues, glands, and viscera; it may produce sympathetic irritations and nervous movements; but it has no constructive or creative power. Who, by an effort of his mind, could place another hair on his head, or add a cubit to his stature?

In forgetfulness of this and common sense, and only noticing the fact, that the mind of one individual cannot alter the body of another, it is asserted, that the little being within the womb cannot be considered as a foreign body with respect to the mother, but rather (in consideration of its connexions) as a part of herself.

Dr William Hunter examined very patiently the influence of the mother's imagination upon her still unborn child, and proceeded upon this right plan of investigation. In 2000 cases of labour, immediately on delivery, and before examining the child, he inquired of the woman whether, during her pregnancy, she had a longing for, or had been frightened by, or her thoughts had dwelt on, any thing particular for any length of time? He questioned her also as to her own ideas on the subject, as to whether she expected to find a mark on the child; if so, what kind, and why? All her answers were taken down in writing, and then he examined the child. He declares that, though he found many children marked, yet in not one single instance of these two thousand did the answers or expectations of the woman agree with the result. Many expected a mark where there was none; and others had not thought of the subject, and had got through their term unnoted by any incidence when there was. Both the St Hilaires, father and son, have been very assiduous in collecting the particulars of every recorded abnormal birth; and the latter asserts, as I have mentioned further back, that Dr Martin's case is the only authentic one in which the woman said before her confinement that her child should be born marked, and her feelings proved to be correct. Thus it is clear how the numbers of instances have been collected to form such a large mass of evidence as proof of the truth of our subject. But when closely examined, the magnitude of this mass fades into insignificance. Remove the ample folds of its gossip drapery, and the giant becomes a dwarf. As I have myself mentioned a number of cases of monstrosities, in which the impression was made on the mind of the mother prior to the birth of the child, do I mean to deny the existence of cause and effect? Certainly not. Let us examine what constitutes the logical term, cause and effect. It is this: A certain act being always, or nearly so, followed by the same consequences. If occasionally the primary being present, the succeeding phenomenon does not appear, we readily admit that in such instances the usual cause is overpowered by some other cause.

But be it remembered, that the exceptions must be few in comparison with the rule. Is such the case with the subject before us? No such thing. Every woman, I repeat, during her gestation of nine months, must have had her attention arrested by some object, or must have been struck by some one idea more forcibly or more frequently than by others, and yet, comparatively speaking, there are but very few children born with a blemish. How, then, are these facts to be explained which have occurred? I answer, the agreement between them is merely accidental, and cannot be looked upon as cause and effect. Every person has been struck by meeting with a number of remarkable fortuitous coincidences. If these were collected and set in a note-book, they should far outnumber those which take place between mother and child.—*Dublin Medical Press*, Nov. 29, 1848.

59.—*On the Dropsical Affections of Pregnant Women.* By M. Devilliers.—M. Devilliers considers that these affections may be most advantageously considered under the following heads: 1. Simple œdema or anasarca. 2. Œdema complicated with affections of the circulatory or respiratory organs. 3. Œdema or anasarca with albuminuria. As a preliminary, he inquires *in what way do the modifications of the economy induced by pregnancy, influence the production or progress of dropsies?* In this point of view the analysis of the blood is of great importance; and the author found that 25 analyses furnished 67·7 per 1000 of albumen, the normal mean of non-pregnant women being seventy; but while in the first seven months the average was 68·6, it was in the last two only 66·4. In those cases in which albuminuria was present, the proportion during the last two months was only 56·39. The researches of Andral have amply shown the coincidence between the diminution of albumen in the blood, and the formation of dropsy; and those of MM. Becquerel and Rodier have established the same in reference to the solid parts of the serum.

1. *Simple œdema or anasarca.* The author believes that the state of repletion of the vascular system is in a far less degree a cause of the effusion, than is the altered composition of the blood. He has not found age or the primiparous condition exert any notable influence in its production, but it seems to occur most easily in the lymphatic temperament. An important influence of pregnancy has been overlooked, viz. that the fact of the increased degree of uterine activity displaces or diverts the blood, and must produce *stasis* and other modifications in the lower extremities. The influence of the pressure of the developing organ is well known, and its inclination will often determine which limb shall be most œdematous. The amount and persistence of the œdema are, however, far from being always proportionate to the degree of development of the uterus. In about half the cases the œdema becomes developed especially between the seventh and ninth months, it is not unfrequent in the fourth or fifth, and is even met with in the third. Although occasionally the œdema is developed in a week or two, it usually requires several, and can never be called active. Once formed, it may undergo the most strange variations, probably dependent on mechanical causes. In a little more than one sixth of the author's cases, the engagement of the fœtal head in the cavity of the pelvis, at the end of pregnancy, was attended with partial or complete disappearance of the œdema. The *urine* in these patients is sometimes normal, sometimes sparing, deep-coloured, or turbid, *but does not contain albumen.*

Varicose veins should rather be regarded as a concomitant than a complication, depending upon the same causes as the œdema, and always preceding it. They were absent in three-fifths of the cases. They often diminish on the appearance of the œdema. In simple œdema the splanchnic cavities contain no fluid, but dropsy of the amnios is sometimes present. In respect to the question whether the existence of œdema at all influences the occurrence of *puerperal affections*, the author observes that in about one-fourth of his cases *metro-peritonitis* occurred; and so intimately did the disappearance of the one and the appearance of the other seem to be connected, that he was at first disposed to regard metastasis as the best explanation. Further experience showed him examples of the persistence of the œdema; and he believes that the cases of the occurrence of serous inflammation on the disappearance of the œdema, narrated by authors, were examples of dropsy accompanied with organic alterations or albuminuria. In the *treatment* of this affection when slight, position, aperients, and mild diuretics suffice. If the œdema is great, and the woman plethoric, venesection may be resorted to. Vapour-baths and gentle friction are very useful; but compression is useless or mischievous. Iron, in certain subjects, is of great utility; but its ad-

ministration must be watched, and coincident small bleedings be put into force if congestive symptoms present themselves.

2. *Dropsy with affections of the central organs of circulation and respiration.*—In these cases organic causes co-operate with those already enumerated, to render the effusion more copious and more important. When the organic disease is but slight, and the dropsy proceeding from it has not preceded pregnancy, the œdema may appear only at the ordinary period, be confined to the lower extremities, and alternate in amount, as simple œdema. Generally, however, it is much more persistent, and has a great tendency to invade the splanchnic cavities, where, indeed, it may commence. When this is the case the birth is generally premature, although sometimes women labouring under dyspnœa from this cause will go their full time, and bring forth strong infants. In treating this affection, when the means advised for severe simple œdema, with punctures of the dropsical parts, or paracentesis abdominis, have failed to give relief, if danger menaces the patient, and the child is viable, we should have recourse to the induction of premature labour.—*Rev. Méd. Chir.*, and *Brit. and For. Med. Chir. Review*, No. V. p. 273.

60.—*Spasmodic Contraction of the Cervix Uteri during Labour.* By Dr SCANZONI.—Our author believes that it is always the internal orifice of the cervix uteri which is the seat of spasmodic constriction during labour. The supervention of this accident is marked by the following symptoms:—After the first period of labour is passed, and the vaginal portion of the uterus has disappeared, the pains suddenly assume a new character, the patient becomes agitated, and complains severely of sharp and constant pain in the loins. The vagina is hot, and often dry. The os uteri is pressed deeply into the pelvis, its edges are thin and hard, and fully on the stretch, even when there is no labour pain, and the presenting part of the child can be felt through the cervix. These symptoms distinguish spasmodic constriction from rigidity of the cervix, which generally obstructs the free dilatation of the os. Rigidity of the cervix, Dr Scanzoni believes to be very rare. Among 4200 cases of labour, he has only met with it five times, whilst among the same cases he has seen, at least, fifty of spasm of the os.

Among many means tried to subdue and destroy this spasmodic state of the fibres of the neck of the uterus, the only one found of much service is the uterine douche, practised in the manner proposed by Kiwisch, for inducing premature labour. (See *Retrospect* for 1848, p. 121.) The only instrument required is a modification of the ordinary enema syringe.—*L'Union Médicale*, Nov. 21, 1848.

61.—*Partial Abortion in Cases of Plural Pregnancy.* By M. BRACHET.—After detailing at length four cases of partial abortion, M. Brachet lays down the three following propositions:—

1. In cases of plural pregnancy, one of the fœtuses may be expelled, and leave the other fœtus to be developed even to the full time.

2. It may happen that the second fœtus may not attain its full development, but be expelled at a period more or less distant from the expulsion of the first.

3. After one fœtus has been expelled along with its secundines, the second fœtus (although dead) and its secundines may remain in the uterus some weeks or even months after the expulsion of the first—*Journal de Médicine de Lyon*, Mars 1848, and *Archives Générales*, Oct. 1848.

62.—*Inversion of the Uterus.* By Dr TYLER SMITH.—This accident has sometimes been attributed to inverted action of the uterus, but more generally to mechanical traction of the cord, and injudicious attempts at removing the retained or adherent placenta. When inversion is referred to traction of the umbilical cord, whether in consequence of a short funis, the sudden birth of the fœtus while the mother is in the upright position, or the attempts of the obstetrician to remove the placenta, it is always believed to depend on the merely mechanical force which is in operation. It is considered that the fundus uteri is dragged down mechanically through the os uteri and vagina, the uterus being supposed to be passive during the occurrence of the inversion.

Dr Smith is persuaded that it depends in *all* cases mainly upon an *active* condition of the uterus. Where it takes place without any mechanical interference, there can be no doubt of the preternatural and perverted activity of the uterus. But even in cases where the placenta is attached to the centre of the fundus, and when the cord is drawn through the vagina with any amount of force likely to be exerted by an accoucheur, it is not a mere mechanical displacement which produces the accident, but the irritation of the fundus uteri, by traction, excites contraction of the fundus, thus producing that contrac-

tion and descent of the fundus uteri, which is the first stage of the accident. The common opinion has very naturally arisen from observing, in some cases, that the fundus uteri, when the placenta is firmly attached, follows the advancing cord, while traction is being used. The depression of the fundus uteri, even in these cases, is not a simple yielding of the part, according to mechanical principles, but an active contraction, excited by the irritation of the fundus uteri by the traction of the placenta.

The steps by which complete inversion is produced are the following:—There is, first, cup-like depression of the fundus uteri; coincident with, or immediately following upon, this depression, there is hour-glass contraction of the body or lower portion of the uterus. The annular contraction of the body of the uterus grasps the introcedent fundus as it would a foreign body, and carries it downward for expulsion through the os uteri, the os uteri being at this time either in a state of inertia, or actively dilated, the same as at the end of the second stage of labour. After the inverted uterus has passed through the dilated os uteri, this part of the organ becomes contracted, preventing reversion from taking place. Thus, there is, first, depression of the fundus uteri, with annular or hour-glass contraction of the body of the uterus, and dilatation of the os uteri. Next, there is intus-susception of the fundus by the body of the uterus. Lastly, complete inversion occurs, with contraction of the os uteri upon the inverted organ. If we wished to describe this accident in three words, they would be —introcession—intus-susception—inversion. The displacement may not be complete; it may in some cases stop at introcession; in others, at intus-susception, and then return to the natural state; or it may remain intus-suscepted. Inversion produces violent disturbance of the nervous system, and is frequently attended by alarming hæmorrhage. But the symptoms of the intus-suscepted uterus are still more violent. The strangulation of the fundus is almost as severe a shock to the system as actual rupture. In inversion, the hæmorrhage is somewhat arrested by the os uteri acting as a tourniquet to the uterus. We may compare perfect inversion of the uterus to intus-susception of the intestinal canal, only that the intus-suscepted portion of intestine is not protruded externally. Probably many cases of prolapsus ani should be called inversion of the rectum rather than prolapsus.

Inversion generally occurs quickly after the delivery of the fœtus, between the expulsion of the child and the expulsion of the placenta. Dr Smith has known it to take place after the death of the mother, and after rupture of the uterus had occurred. In the latter case, the fœtus was passed into the peritonæal cavity, while the uterus became inverted, and protruded through the vagina. The predisposing causes of the accident are the causes of acute labour and excessive or irregular action of the uterus. It is of very great importance to understand clearly the real nature of inversion, as it is one of those accidents which is most confidently referred to malpractice. The less it is considered a mechanical displacement, the less disposition there will be to attribute it to the accoucheur; owing to the prevalence of the mechanical idea, obstetricians have sometimes been blamed most unjustly in cases of inversion.

The *treatment* consists of the mechanical re-position of the uterus. Immediate steps should be taken to reduce the inversion, because of the rapidly increasing contraction of the os uteri, which, by impeding the circulation, causes an increase in the size of the tumour. The size of the uterus should be reduced as far as possible by pressure, and by detaching the placenta in cases where it still adheres. By moderate but sustained force the uterus is then to be passed up through the vagina and os uteri. After the organ has been partly passed through the os uteri, the muscular action of the uterus itself assists in restoring it to the proper position. It is reinstated with a sudden jerk, causing a considerable report at the moment of its restoration. In cases where intus-susception exists, the hand must be passed through the os uteri, so as to overcome the annular contraction, and to restore the intus-suscepted portion to its proper position. Cases of intus-susception and inversion require careful watching until the uterus has permanently contracted.—*Lancet*, Nov. 25, 1848.

63.—*Anomalies of the Menstrual Functions in relation to Fecundation.* By M. Paul Dubois.—M. Paul Dubois has recently illustrated some of these at his Clinique by several cases. Two young women commenced menstruating at eleven and twelve, and were confined at thirteen and fourteen and a half. Such cases of premature nubility, coinciding with a precocious condition of the rest of the body, are by no means rare; and they may be contrasted with certain examples of tardy menstruation, which give rise to very em-

barrassing questions. In one of these the woman was not regular until twenty-one; and in a similar case, in which M. Dubois, sen., was consulted, he, having found on examination the genital organs normal, sanctioned marriage; but the person never became pregnant. Still, there are cases on record in which women have become mothers without menstruating; and M. Dubois relates one in which menstruation first occurred after the eighth confinement. Again, aged women have become pregnant after ceasing to menstruate. A woman æt. twenty-one, now pregnant, was regular at twelve, and has never been so since. In civil practice a cessation of the menses is considered a principal sign of pregnancy; but in legal medicine it is of little account, for it is well known how subject this flux is to arrest by many moral and physical circumstances. In many newly-married women the menses become suppressed for awhile, and then return in augmented quantity, giving rise to the belief in the occurrence of a miscarriage. But for this there has been no foundation, the suppression arising from change of habits on the part of the woman. The persistence of menstruation after fecundation is an anomaly of less frequent occurrence than is popularly believed; for it is wrong to confound with this a slight accidental flux of blood, which usually occurs at quite irregular intervals.—*Rev. Méd. Chir.*, iv. p. 47, and *Brit. and For. Med. Chir. Review*, No. V. p. 276.

64.—*Idiopathic Leucorrhœa.*—1. The discharge is not purulent. In the present state of our knowledge, we cannot recognize pus otherwise than as a consequence of acute or chronic inflammation.

2. The discharge does not arise from an ulceration, nor from a red or thickened, or granulated mucous membrane.

3. Nevertheless, we may find a granulated mucous membrane on the vagina, or on the neck of the uterus, or even ulcerations, at the same time with a true leucorrhœa; the two maladies co-existing. In such a case, nothing else than the nature of the discharge can determine the diagnosis. A true leucorrhœa flows chiefly from the uterus, and such a discharge may be examined separately from the vaginal discharge, which, in a complicated case, will consist of the mixed mucous and inflammatory secretions.—*L'Union Médicale*, Dec. 23, 1848.

V.—MATERIA MEDICA AND THERAPEUTICS.

65.—*Chloroform in Dental Surgery.* By MR CLENDON.—We have been much pleased with the perusal of Mr Clendon's short paper. While he maintains the safety and advantage of the use of chloroform to the patient, he shows candidly the difficulties which it places in the way of the operator. It is obvious that, for all operations in the mouth, the use of an anæsthetic is attended by inconveniences unknown in other surgical operations.

While inhaling, patients frequently stretch out their legs and slide down in the chair; and the head, from their inability to support it, falls forward, or on either side, in a position very inconvenient for removing teeth. From such a posture it would be very desirable to raise them; but, owing to their entire helplessness, this is difficult to accomplish, especially if the patient be at all weighty. Fearing the effort might disturb them, Mr Clendon seldom attempts it, but kneels down, so as to place himself on a level with the mouth, and thus proceeds to remove the teeth—operating, of course, at a great disadvantage. The teeth are sometimes firmly clenched, rendering necessary some force to open the mouth. This occasions loss of time, and tends to disturb the patient. A gag has been suggested. Mr Clendon has tried several contrivances of this kind, and finds them more easy in theory than in practice. The very proposition is startling to patients, who, if they comply, generally contrive, intentionally or unintentionally, to eject it during the inhalation. It is much in the way in operating. Fortunately it is not often required: as the mouth can generally be opened, and kept so, by the insertion of the finger.

During inhalation the mouth becomes filled with saliva, sometimes of a frothy character; and, when one tooth has been removed, the blood which flows mixes with the saliva, and conceals the remaining teeth or roots from view.

By a little tact these inconveniences may be in part obviated; and, on the other hand, the advantages derived by the patient more than compensate them.

On the general action of chloroform Mr Clendon has some sensible observations. "One cannot fail to remark the various effects on different individuals of the same age and sex; no experience enables us to

say beforehand what the precise action will be. We may rely on insensibility to pain; but whether this be preceded by a state of tranquillity or excitement, whether the duration of insensibility will be one minute or ten, or whether the patient will wake up with a smile, or suffer from sickness and prostration, no one can previously determine."

In his remarks on its effects on the nervous system, Mr Clendon appears to us to have been led into some confusion by comparing together genuine varieties of action with mere differences in the degree of anæsthetic sleep.

Mr Clendon does not remember a single patient who complained of headache after its use; nor, although he has employed chloroform in several hundred cases, has it ever produced effects to excite alarm.—*Chloroform in Dental Surgery* by J. C. CLENDON. London, 1849.

66.—*Unusual Phenomena following the administration of Sulphate of Morphia.* By L. B. ANDERSON.—A young lady, from excessive fatigue, and loss of sleep in attending a sick friend, became so "nervous," to use her expression, that she was unable to procure the slightest repose.

A fourth of a grain of the sulphate of morphia was now directed to be administered, and a like quantity to be taken every two hours, unless it increased the pain in the head (which was the only unpleasant sensation she had ever experienced from its use), until she became entirely composed, or fell into a sound and refreshing sleep. She experienced no unpleasant sensation from its use until shortly after the administration of the third portion, when she complained of a "tingling" sensation in the extremities. The hands and feet became cold; the fingers were involuntarily contracted and extended; she experienced some uneasiness about the elbows and knees, and also, at times, a slight difficulty in breathing. The time for the administration of the fourth portion having arrived, she had it given, hoping that it might allay or mitigate those unpleasant sensations. A short time, however, only elapsed after its administration, before all the phenomena above mentioned became greatly aggravated. The muscles of the hands and feet became rigidly contracted; the legs were drawn upon the thighs, and they upon the abdomen; the arms were alternately fixed, extended, and then contracted across the thorax; the muscles of the tongue, fauces, and glottis, became so affected, that articulation and deglutition were almost impossible, and respiration was greatly obstructed. In fact, the spasmodic action of all the voluntary muscles was so great, as to similate a *genuine case* of traumatic tetanus. She recovered under appropriate treatment.

There was no peculiarity in the constitution of this lady, nor had she ever before experienced inconvenience from the use of a preparation of opium. It is true, she had in early life been subject to occasional attacks of epilepsy; an attack of which, however, she had not had for a considerable time prior to the use of morphia. She has taken, since the above-mentioned circumstance, several of the liquid preparations of opium, from which no unpleasant effect was experienced.—*Amer. Jour. of Med. Science.*

[Is it not probable that a mistake had been committed, and strychnia given for the sulphate of morphia ?]

67.—*Physiological and Therapeutic Action of Atropia.* By MM. BOUCHARDAT, and STUART COOPER. (*Continued from* p. 19.)—Full details of five cases are given to illustrate the action of the alkaloid on man. For the most part, the drug was applied in the solid form to the skin, by the endermic method; and occasionally it was administered by the stomach in aqueous solution.

Applied to the denuded dermis in the dose of one centigr. (1-6th grain), it occasioned a burning pain, lasting from five to ten minutes. The remote action was not developed until after the lapse of from fifteen to twenty minutes. One of the first and most constant symptoms, was dryness of the throat, accompanied with great difficulty of deglutition. Dilatation of the pupil was always present, and the following symptoms more or less constantly, vertigo, dimness of vision or complete blindness, tinnitus aurium, numbness and nearly complete loss of power over the limbs, paleness of the countenance, quick and weak pulse, coldness of the extremities, loss of general sensibility, and delirium occasionally of a violent kind. Micturition was either retarded, or the patient was tormented with frequent desire to pass urine.

At the end of from twelve to twenty hours, these symptoms, which on several occasions assumed an alarming degree of intensity, had subsided. Wine and tea were found useful as restoratives.

The first of the cases recorded is one of severe chorea, which had resisted for a long period the ordinary remedies. The atropine was applied daily by the endermic

method during several days, with the effect of completely removing the disease. The physiological action of the drug was fully manifested. [Trousseau and Bretonneau have found the powder of the root of belladonna very useful in the same complaint.] The second case is one of bronchitis and emphysema, accompanied by severe dyspnœa. The endermic application of the alkaloid was continued seven days, at the end of which period the patient enjoyed nearly complete relief from her sufferings. The same treatment was successfully applied in a case of aphonia following inflammation of the throat, and in a severe case of hysteria of several months standing. For the best method of exhibiting atropia internally, we refer to the *Retrospect* for 1848, p. 180. It is employed in the solid form when applied endermically. The quantity at first should not be larger than two millegr. (1-30th gr.), but it may be augmented gradually to one centigr.—*Gaz. Méd. de Paris*, Dec. 23, 1848.

68.—*The Advantages of Chloride of Gold as a Caustic.* By M. CHAVANNES.—MM. Récamier and Légrand signalized the advantages of the chloride of gold as a caustic many years ago—and our author confirms their statements from observations made chiefly in the treatment of lupus and syphilitic tubercles and ulcers. M. Chavannes maintains that the chloride of gold destroys less than the other caustics, and, when the crust separates, cicatrization is found in a forward state of advancement. The cicatrix which remains after the use of this chloride, is said to be less marked than when other caustics are employed. It is prepared thus:—gold leaf one part, hydrochloric acid three parts, nitric acid one part.—*Gaz. Méd. de Paris*, Dec. 23, 1848.

69.—*On Collodion and Asbestos as a Remedy for Toothache, and a Material for stopping Teeth.* By Mr ROBINSON.—Mr Robinson has frequently applied collodion in severe cases of toothache arising from exposure of the nerve, with perfect success, when no persuasion could induce the patient to submit to the radical cure (extraction), either with or without the use of chloroform.

The method adopted is to let the patient wash the mouth with warm water, in which a few grains of bicarbonate of soda have been dissolved. Mr Robinson then removes from the cavity any foreign substance likely to cause irritation. After drying the cavity, the collodion, to which have been added a few grains of morphia, is dropped from a point into it, after which it is filled with asbestos, saturated with collodion, over which again a pledget of bibulous paper is placed. In a few seconds this becomes solidified, and forms an excellent non-conductor of heat and cold to the exposed nerve. By occasionally renewing this, Mr Robinson had been enabled to effect a more durable stopping than with gold.—*Medical Gazette*, Dec. 22, 1848.

VI.—DIETETICS, HYGIENE, AND MEDICAL POLICE.

70.—*Diseases of the Mercury Miners at Almaden, in Spain.*—(Continued from vol. i. p. 255 of *Retrospect*).—Of the diseases of the Almaden miners, those which specially result from the nature of the ore which they work, and which may be called mercurial diseases, are affections more or less severe of the mouth, and of the nervous system. An exact description of these affections is still a desideratum. We have plenty of writings on the salivation and stomatitis which are observed as the result of the therapeutic administration of mercurials; but the specialties in the characters, progress, and terminations of the affection of the mouth in mercury miners, have not yet been described.

The disorders of the nervous system have been studied by various authors, among others by Merat, who have observed the trembling peculiar to gilders, mirror-makers, &c., but no one has described the affections of the nervous system as they show themselves here, viz., in forms and degrees so different and well characterised, that they are distinguished here by familiar names. Thus the miners distinguish among those affected by trembling, the *temblones*, the *calambristas*, and the *modorros*, according as the patients present trembling, properly so called (*temblor*); trembling accompanied by pains and remarkable convulsive phenomena (*calambres*); and trembling accompanied by paralysis and impairment of the intellectual faculties, the last stage of the disease, constituting the condition of a *modorro*. The exactness of these distinctions will appear presently.

The affection of the mouth may be first described, which shall be called stomatitis, without discussing the question whether inflammatory action is always its principal pathogenic element. It has two se-

parate forms, the acute and chronic stomatitis.

The acute form generally manifests itself in the newly arrived stranger workmen, who go into the mines without precautions, and at once engage in the most hurtful kinds of labour. The morbid phenomena bear the most marked resemblance to those which follow the use of calomel. Sometimes they are of extreme violence; the mucous membrane of the mouth and pharynx inflame and ulcerate over its whole extent; all the salivary glands become engorged; the tongue protrudes betwixt the teeth; and the unhappy sufferers, unable either to swallow, sleep, hear, or speak, perish in frightful torments. The following notes of a case witnessed in the Hospital at Almaden, present an example of acute stomatitis, as it is observed in newly arrived workmen.

Francisco Munoz, aged twenty-eight, came to work at the transportation of ore in the mine, on the 1st December 1847. No particular change was observed in him till the fourth day of his labours. He had then a sharp febrile attack, with weight in the head, bending of the body, and in such a state of mental torpor that he could recognise nobody. He was incapable of any mental exertion, and evinced only a desire to sleep. This lasted only three days, and from that time to the end of December he could work in the mine. He had no dyspnœa, dyspepsia, or anorexia, and merely suffered from some nocturnal pains which kept him from sleeping. In this condition he went to work in the deepest part of the mine, and the next day, for the first time, he felt pains in the gums and along the lower jaw. In spite of this he returned for two successive nights to work, but the third day he was so ill as to be obliged to give up. The swelling of the gums extended to the interior of the cheeks, salivation showed itself, and after in vain attempting for five days to be treated at home, he entered the hospital, where he was seen next day. The gums were found tumified, of a dark red colour, and spongy appearance. They were detached, and as if eroded, on a level with the necks of the teeth. The teeth and tongue were covered with a thick yellowish crust; the tongue was not ulcerated, but swollen and marked with the impressions of the teeth. The buccal mucous membrane presented several white superficial ulcers, the long diameter of which, horizontally, corresponded with the alveolar border of the gums. The salivation was abundant, the breath fœtid. Next day the local symptoms were the same, the pulse seventy-two; the patient sleepless, swallowing with great difficulty, and unable to chew. In another patient, under the care of Dr Gervasio Sanchez Aparicio, also affected for the first time with acute stomatitis, and under treatment for fifteen days, there are still large ulcerations under the left cheek, and on the gums and border of the tongue on the same side; the base of these ulcers is whitish, and their borders inflamed. Dr Gervasio states that he observes the ulcerations more frequently on the left than right side of the mouth, and he thinks this to depend upon the custom which the miners have of chewing rather with the left than right side.

The stomatitis, as exemplified by these and other cases, does not differ materially from that which is observed as a sequence of the therapeutical employment of mercurials. It is not among the acute, but among the chronic cases of the mouth affection, that the phenomena peculiar to Almaden manifest themselves. The affections of the mouth, proper to the workers in cinnabar, are those which depend upon a repetition of the stomatitis; and more frequently still, those which result from an action of the mercury, though gradual and unattended with any of the principal phenomena indicated above. These are the cases, by far the most numerous, which are comprehended under the name of chronic stomatitis.

The affections now to be described, sometimes succeed to acute stomatitis, sometimes are primary. In the first case, when the inflammatory phenomena have disappeared, the ulcerations are healed, and the salivation has ceased, this is what is observed; the gums remain spongy, they are detached from the necks of the teeth, which become loose and decayed, and the patients eventually lose them one by one.

But many individuals come to lose their teeth completely, in a slower, and, it may be said, gentler manner. The affection does not commence violently, there is never either severe pain or fever, or swelling of the salivary glands; in some cases there barely exists a slight ptyalism. At the first, there is a little swelling of the gums, especially at the free border, which is redder than the rest, and forms a sort of ridge round the teeth; then, betwixt the border of the gums and the teeth, there is secreted more or less of a grey matter, and there is a slight tenderness in brushing the teeth, or chewing. Sometimes there are slight ulcerations; but the patients keep quite free from those severe affections which compel them to suspend labour.

In others the gums become swollen and spongy, and bleed very readily, without showing the least signs of inflammatory action. The miners regard this tendency to bleed as a favourable symptom. They fancy that the absorbed mercury is eliminated with the blood, and that they are thus preserved from more severe affections. Be the course of symptoms what they may, the result is the same in all, the dropping out of the teeth; when this has resulted, the workmen cease to suffer, and they know this so well, that they say that whenever a man has lost all his teeth, or even merely all his grinders, he thenceforth enjoys immunity from all affections of the mouth. Whether this opinion be really true or not, it is consonant at least with what can be observed among the workmen. They lose their teeth without regret; many of them from thirty-five to forty years of age, are quite toothless, and have in consequence always a peculiar and easily recognised physiognomy. Many of these men have been examined; none of them have either ptyalism or ulcerations, and in some the tissue of the gums is firm, rosy, and healthy, and they assert that it has become firm only since the decadence of the teeth.

In the men, on the contrary, who have partially lost their teeth, the mouth is never in a sound state; in most of them the gums are spongy, the teeth loose, and some of the molars are gone. The breath is generally fœtid, though there is neither ulceration nor observable ptyalsim.

If a considerable part of the workmen who pay some attention to hygienic measures escape the acute stomatitis, it may be confidently affirmed, that none, or scarcely any, escape some amount of the chronic form of the affection; not merely the miners, but the engineers, and even the superintendents who descend into the mine only once a-week, lose some of their teeth.

The exceptions are very rare; only two individuals were seen who had worked for years in the mines, and had suffered no inconvenience beyond a little swelling of the gums. They ascribe their exemption partly to their good constitution, but chiefly to their attention to hygienic measures. They practise temperance in every respect, and carefully rinse out the mouth with tepid water on leaving the mine; to which latter precaution they ascribe the chief share in their preservation from the disorders of the mouth. When this fact is connected with the observation of Don Gervasio, that the ulcerations are most common on that side of the mouth which is most used in chewing, and with the common opinion, that the taking of food in the mine is one of the most fertile causes of the stomatitis, it seems probable that the direct absorption of the mercury by the mouth, contributes powerfully to cause and keep up these affections.

The great variation which is observed in the rapidity and violence with which different individuals are attacked by the mouth affection, appear to depend chiefly on peculiarity of constitution. Some are affected after one day's exposure, others resist it for weeks or even months.

Little need be said as to the treatment. When the affection is slight, the miners treat themselves by touching the ulcerations with alum or sulphate of copper. In the hospital, the common treatment for mercurial salivation is followed; at first emollients and astringents; afterwards, for the ulcerations, alum or sulphate of copper; if the inflammation is very active, they use bleeding and mustard foot-baths, the patients are put on low diet, and afterwards they are fed on milk, which according to the common opinion is very beneficial to the Almaden miners.

The affections of the nervous system described collectively under the common name of the mercurial trembling, are the most interesting of all the effects produced on the miners by the absorption of mercury. In reality, the mercurial poisoning manifests itself in the Almaden miners in the form of several groups of phenomena, corresponding with different degrees of poisoning; and it is only at the beginning, before the malady has acquired its full intensity, that the trembling, strictly speaking, forms its principal character. The distinctions of the cases by the miners themselves, into *temblones*, *calambristas*, and *modorros*, have been already stated, and will be adhered to in the following observations.

Is it the case, that in the various professions employing mercury, and which have hitherto furnished almost all the cases on which medical observations have been made, that the symptoms which correspond to the two last degrees of the poisoning are awanting, or how can we explain why these symptoms are either entirely omitted, or barely indicated in most of the classical treatises on mercurial trembling? It is only here and there that we meet with isolated cases, which enable us to affirm, that convulsions, pains, and mercurial paralysis, may be produced in any circumstances, as well as at Almaden, from prolonged exposure to mercurial vapours.

1. Mercurial trembling, properly so called (*temblor*). After the lapse of

greater or less time, according to the nature of the work, a slight tremor manifests itself, commencing in the upper extremities. Tremor, to this extent, is a phenomenon so common, that it may be said that no one in the mines escapes it. It is not only compatible with continuation at work, but even with excellent general health. Many workmen, of fresh and healthy aspect, when asked if they have trembling, reply that they do tremble a little when out of the mine, and, when asked to extend the hands, the arms present a succession of short and rapid oscillations, which no act of volition can control. This state of matters may continue for a long time without the supervention of any other symptoms, in those who lead a regular life, and adopt the hygienic precautions formerly alluded. The trembling is not constant, and varies much in intensity. Thus it ceases almost completely in the interior of the mines, in bed, and when both mind and body are quiescent. It increases under the influences of mental emotions, and certain states of the atmosphere; it is very sensibly aggravated by alcoholic potations. Of all meteorological agents, that which exerts the most marked influence on it is the east wind (*solano*), one of the predominant winds of the territory. Don Eusebio Sanchez, director of the establishments of Almadenejos and the Val de Azogue, whose duty takes him frequently into the mines, and who is slightly affected with tremor, has told the writer, that when the solano blows, his tremors augment so much as to prevent him absolutely from writing.

2. Mercurial trembling, with convulsive motions and pains (*calambres*). When the mercurial trembling, as above described, has lasted for some time, and the patient continues exposed to the cause which produced it, convulsive movements and pains are added to it, and the disease then bears the name of *calambres*. At this stage, the proper trembling is replaced by a series of muscular contractions, stronger, more extended, and engaging a more considerable number of muscles. The phenomena presented by the workmen who are *temblones*, bear a great resemblance to the tremor of drunkards. The *calambristas*, on the contrary, are more like those labouring under chorea. The convulsive character of the contractions depends upon the predominance of the flexor over the extensor muscles. This predominance is such, that when at the coming on of an attack, the calambrista seizes any object, no effort can make him let go his hold; and the will of the patient is as ineffectual as external force. It is often seen that patients, who at such a time grasp the clothes of those who approach them, tear out the bit which they have seized.

When these convulsive phenomena exist, there soon supervene those pains, which, though not constant, form nevertheless one of the chief characters of the calambres. According to the statement of a Spanish medical writer, these pains most commonly occur in those who, having already the convulsions, persist in going into the mines. According to the same authority, the part generally first affected is the great toe, sometimes it is the thumb, and from these points the affection extends till it invades the whole muscles of the body, even those of organic life, and particularly the stomach. The pains and convulsions are not always of relative intensity; sometimes, it is said, the pains invade one side of the body only, whilst the other is affected by the convulsions. The pains of the calambres are piercing, acute, and sometimes of intolerable intensity. The convulsions, like those of the chorea, are not continuous. Jussieu had remarked this long ago, and had very properly observed, that they are more marked when the patients are under impressions of surprise or fear. The writer had a good opportunity of observing the influence of moral causes, when, in company with the superintendant of one of the mines, he addressed some calambristas who were there, to question them about their complaints. When he entered the mine, these men were all calm, but when brought up before the superintendant, the muscular movements increased so much as to render it necessary to support some of them to prevent them from falling, and they made their replies to questions almost unintelligible. It was no doubt this cause, operating in producing occasional accessions of the malady, which caused it to be supposed, that among the convicts in the mines, the convulsions were often feigned. This state of matters still continues, though there are now no convicts in the mines.

In the calambristas the functions are more or less impaired, according to the degree of the malady. There is generally want of appetite. The pulse is not affected, except when there are febrile accessions, which are regarded as a bad symptom. The skin is generally rather cold than warm, except in feverish attacks. The most remarkable phenomenon is the insomnolency, which attacks the patients from the time when the pains supervene upon the choreic movements.

3. Mercurial convulsive paralysis, with

impaired intellectual faculties. When the above state continues to make progress, the patients are observed at length to lose their vital powers, and become as if paralytic. They are now called *modorros*. These unhappy persons have an almost constant trembling, occasionally assuming the convulsive character, but without any of the pains of the calambres. The intellect also gives way, especially the memory; some of them who are unfit for any work can still walk about; and one, who was observed by the writer creeping along the walls with the help of a stick, presented a singular spectacle. He made one step forward, then stopped, throwing back his head and trunk, as if he found himself confronted by a phantom; then he again threw himself forward, as if he were going to fall on his face. The writer had visited in their houses many of the modorros, who, for several years, had never been able of themselves to rise from their chairs, or put on their clothes, or take their food. Two of them had so lost their memory, and the faculty, if not of comprehending, at least of answering questions, that absolutely nothing could be learned from them. Their physiognomy bore a strong impress of stupidity, and they only articulated vague and confused sounds. They are kept in their houses at the fireside, seated in a chair, like infants. A somewhat similar state was observed in an old miner, who answered questions pretty exactly, although his speech was so interrupted, that he could be understood only with extreme trouble. His age is fifty-four, though he looks to be seventy. He eats, digests, and sleeps well, and has no pain even when the muscular movements are very strong. He fears changes of cold and heat, and without quitting his fireside knows when the *solano* blows, as he is then more affected by the convulsions. He sweats frequently, and his hands are habitually clammy and cold.

The convulsive movements in the modorros are also affected by mental emotions, as well as by the east wind. The predominance of the flexors over the extensors is particularly marked, and it is only the latter which appear to be paralysed. It is singular to observe these helpless wretches, incapable habitually of making any regular movement, have the power, when under the influence of any mental emotion, especially anger, to seize an object, and hold it with such tenacity, that it cannot be forced out of their grasp.

No mental derangement, in the strict sense, is observed in any of the stages of the mercurial nervous disorders. In the most advanced cases, the patient seems incapable of any mental act, but without any delirium.

Treatment of the nervous disorder. In the first degree, or that of mere tremor, it is enough for a cure, in most instances, to quit work, change the mode of life, abstain from wine, and keep up the action of the skin.

When the convulsions with pains have come on, the cure is more difficult, and is rarely complete. The choreiform contractions and the pains may be subdued, but almost always there remains a trembling, liable to be aggravated at times. It is affirmed that a former physician, D. Manuel Carrasco, had succeeded in curing the calambres by anti-spasmodics and narcotics, chiefly musk and opium, and D. Vicente de Areraca considered the former as a specific against the calambres. He gave it in doses of 5 centigrammes (little more than half a grain) in the evening, repeating it in the night, and associating it with opium when the pains and insomnolency were great.

Sulphur was also employed in the treatment of D. Manuel Carrasco. He gave a scruple towards bed-time every night in a decotion of sweet acorns [*Quercus ballota*], and anointed the more painful parts twice daily with an opiate liniment.

It has never been the practice to bleed except when the patients were robust, and the pulse slow and full. Carrasco recommended great caution in the use of the lancet, and his successors appear in this, as in other points of practice, to conform very much to his ideas.—*Correspondent of L'Union Médicale*, Nos. 120 and 129, 1848.

LONDON: JOHN CHURCHILL, PRINCES STREET, SOHO.
EDINBURGH: SUTHERLAND AND KNOX, 23, GEORGE STREET.
FANNIN AND CO., DUBLIN; J. B. BAILLIERE, PARIS;
AND ALL BOOKSELLERS.

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

MARCH, 1849.

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I.—MORBID ANATOMY, PATHOLOGY, AND PATHOLOGICAL CHEMISTRY.

71.—*Source of Error in Andral and Gavarret's Method of Analysing the Blood.* By Dr MOLESCHOTT.—The process employed by MM. Andral and Gavarret (Ann. de Chimie, tom. lxxv.) is as follows:

1. The proportion of fibrine is estimated by stirring a known weight of fresh drawn blood, and then washing, drying, and weighing the fibrine which adheres to the "balai."

2. Another weighed portion of blood is evaporated at 212°; the residue represents the *total solids*—the loss the *water*.

3. A weighed portion of serum is evaporated at 212°; by again weighing it, the relative proportions of *serous solids* and *water* are at once determined.

4. It is assumed that the whole water in the blood is uniformly charged with serous solids; hence the amount of globules is calculated by deducting from the total solids (2) the due proportion of fibrine (1) and an amount of serous solids proportionate to the water lost by the blood during evaporation (2).

EXAMPLE.

1. 1000 grains of blood yield of *fibrine*, ... 3
2. 1000 grains blood evaporated yield { Total Solids, . . 200 / Water, . . . 800
3. 110 grains serum evaporated yield { Serous Solids, . . 10 / Water, ... 100

4. The total solids minus the fibrine, *i.e.*, 200 — 3 = 197. But by (3) it is found that for every 100 of water, 10 of serous solids must be deducted. From 197, therefore, 80 must be subtracted; *i.e.*, 197 — 80 = 117 globules.

The analysis of 1000 parts of blood may accordingly be now stated as follows:—

Fibrine, . . .	3
Serous Solids, . .	80
Globules, . . .	117
Total Solids, .	200
Water, . . .	800
Total,	1000

Dr Moleschott states two objections to the above process. *First*—A part of the water of the blood holding albumen, salts, &c., in solution, is undoubtedly contained within, and forms an essential part of the blood corpuscules; but in Andral and Gavarret's calculations, these albuminous and saline constituents are deducted, and hence the true proportion of globules is considerably underrated. As it is impossible to determine with accuracy the relative amount of water contained in the blood plasma, and within the cavities of the globules, this error of analysis does not admit of correction. *Second*—A more important source of inaccuracy relates to the determination of the amount of serous solids. The first portion of serum which separates from a portion of blood, contains (according to Thackrah) a less proportion of albumen than the serum which afterwards separates. Andral and Gavarret, however, distinctly state, that it can easily be shown by analysis, that the portions of serum which successively separate are identical in composition. Dr Moleschott has investigated this subject by experimenting upon ox blood. Four portions of serum were successively collected and examined. The first, which separated from the clot in ten minutes, contained 8·13 per cent. of solids; the second, which separated in two hours, contained 11·56; the third, which separated in twelve hours, contained 18·53; the fourth, which separated in twenty-four hours, contained 20·03. According to Dr [illegible] of organic or inorganic matter, containing solid particles, become most concentrated in the vicinity of the particles. In proof of the universality of this physical law, he refers to the phenomena of crystallization, and to original experiments with different fluids. He infers that the serum in and around the clot must be more concentrated than that which usually floats at the surface of the vessel into which the blood is received, and that, since this is the very portion usually selected for analysis, the amount of serous solids determined from it must be too small, and the proportion of globules consequently overstated. Moreover, the errors pointed out in these two objections, although of opposite kinds, will not necessarily compensate each other.—*Zeitschrift für Rationelle Medizin*, Band vii. Heft 2.

[The first of Dr Moleschott's objections will, we believe, apply with equal force to every method hitherto devised for estimating the amount of the corpuscular element in blood. Chemical accuracy cannot of course be attained by Andral and Gavarret's process, but results sufficiently accurate and uniform for pathological purposes may, we believe, be arrived at. We can see no reason for regarding the albumen and salts held in solution within a blood globule as an essential ingredient of the corpuscule; and there seems no greater inconsistency in subtracting from the globuline these soluble constituents, than in deducting their solvent-water. Any considerable variation in the amount of globules being accompanied with a corresponding variation in the amount of *corpuscular envelopes*, will of course be detected by Andral's method of analysis.

Dr M.'s second objection is possibly better founded, and suggests the propriety of waiting for complete separation of the serum, and of mixing its different strata before selecting a sample for analysis. We have twice made the following experiment since reading Dr M.'s essay. A patient was bled at the arm to ℥ xii, and the blood received in a tall narrow preparation jar, which was then carefully covered in order to prevent evaporation. The *first* portion of serum (which separated within half an hour) was set aside in a stoppered phial for examination; the jar was then again covered, and remained undisturbed for twenty hours. Other two portions of serum were now removed, viz., No. 2 from the surface of the fluid, and No. 3 from the vicinity of the clot; the densities of all three, being taken by means of a specific gravity bottle and delicate balance, were found in both experiments to correspond most accurately. We subjoin an account of

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EXPERIMENT II.

S. G. bottle contained—	Grs.
of Distilled Water at 60°	105·73
of Serum No. 1 at do.	108·32
of Serum No. 2 at do.	108·32
of Serum No. 3 at do.	108·31
The density of 1 and 2 was consequently	1024·49
... ... of 3 . . .	1024·40

The difference ·09 (equivalent to about ·3 of a grain of solids in 1000 serum) was in favour of the *earlier* samples, and may be accounted for by some trifling error in manipulation. As it may be assumed that the solid contents of serum bear a direct ratio to its specific gravity, we conclude that Andral and Gavarret's process might have been applied in this case without fear of error.]

72.—*On the Pathology of the Muguet or True Thrush of Children.* By Dr WILLSHIRE (Medical Society of London).—It is now well known that Gruby, Berg, and other observers, have ascertained that the curdy matter which is deposited in the mucous membrane of the mouth and œsophagus of children in this disease is a vegetable organism, possessing a microscopic structure very similar to the lower orders of fungi. Dr Willshire corroborates this fact from his own observation, but is disposed to view the presence of the parasite, not as the cause of the disease, but as the effect of an exudation previously thrown out, and therefore only a contingent or secondary phenomenon, dependent upon the laws regulating the decomposition of the exuded matter. He thinks that the exuded matter, loaded with the materials of the child's aliment, passes partially into a species of decomposition, analogous to fermentation, and gives rise, as in the latter process, to a vegetable growth.—*Med. Gaz.*, Feb. 2, 1849.

[The author alludes to the experiments of Gruby, tending to prove that the diseases depending on vegetable parasites cannot be inoculated; but he does not appear to be aware of the experiments of Dr Hughes Bennett, in which direct inoculation of the tinea favosa was produced.]

73.—*On the quick Absorption of Virus, and on the utility of Cauterization in Poisoned Wounds.* By M. RENAULT, Professor at the Veterinary School of Alfort.—M. Renault has performed two series of experiments.

First Series.—Thirteen horses were inoculated with the virus of glanders. Ninety-six hours afterwards the actual cautery was applied freely to the wound in two of these horses, and a circular piece of skin was removed from around the inoculated point. Both died of glanders, one in eight, the other in twelve days. The remaining eleven horses were cauterized at periods varying from one to fifty hours after inoculation. All died of the disease in from six to twenty days.

Second Series.—Twenty-two sheep were inoculated with the virus (claveleux). The wounds were all deeply cauterized, at periods varying from five minutes to ten hours after inoculation, notwithstanding which the genuine (claveleux) pustule was developed on the site of the wound in every case.

From these facts M. Renault concludes, that, unless applied immediately on receipt of the injury, cauterization is useless, on account of the very rapid absorption of the virus.—*Gaz. des Hôpitaux.* Jan. 23, 1849.

74.—*Milky Urine.* By M. REVEIL.—The presence of the elements of milk in the urine has been observed by the author, under circumstances such as appear to preclude all chance of error. The case was one of a child at the breast, and M. Reveil took care to operate on urine passed into a clean vessel in his own presence. It was milk white, or slightly yellowish on emission; when left unmoved for some time an oily scum formed on the surface, while a mucous sediment subsided. Ether rendered the urine transparent, and heat produced a coagulum. Further examination showed the presence of all the elements of milk.—*Journal de Chimie Médicale*, Jan. 1847, and *Union Méd.*, Feb. 15, 1846.

II.—PRACTICE OF MEDICINE.

75.—*Clinical Notes taken in the Hospitals of Paris and Vienna.* By ALEXANDER FLEMING, M.D.—*Paracentesis Thoracis in Acute Pleuritic Effusion.*—Some remarks on this operation by Dr M'Carthy, the intelligent Parisian correspondent of the *Medical Times*, have induced me to refer to my notes on the subject. Although Professor Trousseau has contributed powerfully to impress upon the profession the advantages of paracentesis thoracis in acute effusion into the chest, the proposal has not ori-

ginated with him. The operation has been performed by Skoda of Vienna, and Pfeuffer of Heidelberg, and in some of the older, more especially German writers, the indications for its performance will be found distinctly described.

It is a rare occurrence, nevertheless it sometimes happens, that in pleurisy, while the inflammatory fever is still present, and only a few days have elapsed from the onset of the disease, the serous effusion may be so copious, as not only to compress the lung of the affected side, but also to interfere so much with the action of the lung of the opposite side, that death from asphyxia is the result. Under these circumstances, viz., extensive effusion with impending asphyxia, puncture of the thorax is not only admissible, but essential for the preservation of the patient. Professor Trousseau recommends the withdrawal of all the fluid at once; and from the happy results of this practice, which I witnessed in a case in his wards, I believe it to be the best. In the case referred to, the lung expanded readily to occupy its normal volume, and the patient obtained immediate relief to her agonizing sufferings.

Professor Trousseau has met with nine cases of pleurisy where the effusion was so abundant as to threaten death by suffocation. In three of these the patients died asphyxiated, the operation not having been had recourse to; the fluid was drawn off in the other six cases, and all recovered.

In chronic pleuritic effusion, the operation is much less successful. Thus, in five cases, where puncture was performed by M. Trousseau, only one recovered. This want of success is due to several causes, among which may be mentioned the difficulty which the lung has in resuming its former volume, and the probable existence of secondary tubercular disease in its texture.

The following case, taken from Dr M'Carthy's report, illustrates the above remarks:—

F. C., aged 19, was confined on the 19th of January; on the third day after her confinement she got up, and since that period complained of a slight pain in the left side. On the 1st of May she caught cold, and on the 4th was conducted to the hospital, where considerable dilatation of the left side of the chest, accompanied with dulness on percussion, and fever (pulse 100) were observed. The pulsations of the heart were distinctly recognised beneath the right breast. The spleen was hypertrophied, and descended as low as the spine of the ilium. Infusion of digitalis, and small doses of calomel, repeated every hour, were prescribed, and were continued for two days, during which the pleuritic affection increased in abundance. Paracentesis was then performed in the seventh intercostal space, close behind the mamma; 2400 grammes (5lb.) of fluid escaped, and coagulated spontaneously a short time after the operation. The heart immediately returned to its place, and the resonance of the chest was restored in all but the most inferior part of the posterior region. The signs of the persistence of a small quantity of effusion were still perceptible during a few days, and the patient left the hospital a week after the performance of the operation completely cured.

The trocar recommended by M. Trousseau in the performance of paracentesis thoracis, is noticed at p. 36 of the *Retrospect* for 1848.—(*To be continued.*)

76.—*On Idiopathic Glossitis.* By Dr GRAVES.—Dr Graves gives the following cases of this rare affection:—

I. Mr B., a medical student, solicited my attendance. I found him labouring under severe febrile symptoms of a week's continuance, ushered in by violent rigors, great pain in the neck and occiput; somewhat relieved on the second day by profuse epistaxis. The left half of the tongue became then very tender and painful, and gradually increased in size. At my first visit it was enormously swollen, and nearly filled the entire cavity of the mouth, which could scarcely be closed on account of the protrusion of the tongue. The right half of the tongue was perfectly natural, and its comparatively diminutive size formed a striking contrast with that of the left.

Two or three applications of six leeches at a time to the inflamed half, part of which, at my first visit, appeared on the verge of gangrene, produced a speedy decrease of the tumour and inflammation. The bleeding from the leech bites was very great. Articulation and deglutition, before very difficult, were quickly restored. He is at present (two years since the attack), able to speak perfectly, although the left half of the tongue is still perceptibly increased in size.

II. The following case was communicated to Dr Graves by Dr Neligan; it occurred in a stout countryman aged forty, and was caused by his working for some days up to his waist in water, in draining a river. The affection came on with rigors and the ordinary symptoms of fever, as in the case of Mr B., but the entire tongue was engaged, and was so enormously swollen as to prevent the patient

from articulating, swallowing, or closing his mouth. Deep incisions were made transversely into the substance of the organ, which were allowed to bleed freely, and he was put rapidly under the influence of mercury; this plan of treatment proved so effectual, that he left hospital on the third day quite well.—*Clinical Lectures by Dr Graves*, vol. ii.

[Our readers will find an interesting case of this disease detailed in our last number by Dr Selkirk of Carluke. We beg also to refer them to the first volume of the *Edinburgh Journal of Medical Science*, 1826, for the account of four interesting cases taken from the foreign journals of that period.]

77.—*On the Disease of the Skin termed Keloides.* By ERASMUS WILSON, F.R.S. —In this paper, the author, after considering the etymology of the word "keloid," and the manner of its employment by Alibert—the relation of the disease to cancer, and the opinions of writers upon this question—the rarity of the affection —its etiology, and the more remarkable characteristics of the morbid growth—proceeds to point out the distressing symptoms by which it is often accompanied, with the view of determining how far an operation for its removal might be considered desirable. In those instances in which operative procedure had been adopted, the disease had returned in the cicatrix, and in one case, also, in the smaller cicatrices left by the sutures used in the operation. The conclusion to which the author arrives is unfavourable to operative procedure; and he observes, that in no case is an operation warrantable until every chance of relief by other means has failed. The author then passes in review the treatment recommended by those authorities who had written on the subject, and concludes with the detail of three cases of the disease.

All the cases occurred in healthy-looking men: in the first, the disease was developed on the presternal region, and also on the leg; in the second, on the shoulder and gluteal region; in the third, as in the first, on the sternum. It presented itself in the two forms designated by Alibert *keloide radiciforme*, and *keloid cylindracée*. In the first and second cases it gave rise to extreme inconvenience, and to much of the peculiar burning, stinging, and smarting pain, which is characteristic of the disease: but in the third it was extremely reduced in size, having undergone a spontaneous cure.—*Proceedings of Medico-Chir. Soc. of London, in Med. Gaz.*, Jan. 26.

78.—*On the Bronchitis and Pneumonia of Infants.* By RAY CHARLES GOLDING, M.D.—The author, after indicating the reasons why a diseased action of the respiratory organs is so easily established in early life, and pointing out the leading predisposing causes (the exciting cause both of bronchitis and pneumonia being always exposure to cold), endeavours to systematize the symptoms and physical signs of infantile bronchitis. We give his conclusions in an abbreviated form.

1. The bronchitis of children may be acute, attended with copious purulent secretion, dyspnœa, and inflammatory fever, or be mere congestion of the lining of the air-tubes, with increase of their natural secretion, without fever or dyspnœa of any importance.

2. The degrees of dyspnœa and fever vary much; they are most intense when the general constitution is most vigorous, and in such cases bronchitis is apt to pass into lobular pneumonia. The bronchitis of measles and scarlatina is attended with intense fever, and prone to pneumonic complication.

3. Bronchitis is apt to become chronic in strumous children; and where a predisposition to vesicular emphysema exists, frequent bronchitic attacks are a fertile source of that lesion.

4. Pneumonia, when supervening on bronchitis in children, is usually lobular; sometimes it is lobar, attended with the same symptoms and changes as in the adult; that following scarlatina and smallpox is usually of the lobar kind; and, when the inflamed portion is near the surface of the lung, pleurisy is not unfrequent.

5. Expectoration is usually profuse and purulent, though swallowed and sometimes vomited with other matters in the stomach.

6. The respirations are increased in frequency, often forty or forty-five per minute; the expiration is usually prolonged; the râles vary in character and loudness, according to the size of the tubes at the spot examined, and the nature of the secretion in it. The following points regarding these sounds are of practical value. *a.* Although commixed, the varieties of the mucous and crepitating râles may with care always be discriminated. *b.* Mucous râles indicate free effusion into, and thick consistence of, the secretion in the bronchial tubes, and consequently more of a congested than an inflammatory

condition of the parts. If inflammation has been previously acute, it may be known to be resolving when such râles are audible.

7. Crepitation indicates scanty effusion into the bronchial tubes, with more or less complication of the pulmonary parenchyma. This sound, whether it be large or small, makes the commencement of inflammation, or such a congested state of the parts yielding it, that antiphlogistic measures must be resorted to.

8. Mucous râles are, according to Dr Ray Golding, not audible during inspiration, whilst crepitation is chiefly heard at the end of inspiration, or during the prolonged expiration usually present during these circumstances.

9. A large portion of lung must be condensed by inflammation to elicit a well-marked dulness on percussion; for the lungs of infants are so well permeated by air (except when a mechanical obstruction exists to its ingress), that a small portion of condensed lung is not easily detected. Blueness of the lips, with general pallor of the surface, indicates a degree of inflammation, or extreme congestion, which, if not relieved, must prove fatal.

10. The prognosis in these cases is uncertain and hazardous. So long as the cutaneous transpiration is kept up, and other organs remain unaffected, no apprehension need be entertained. But if the respirations become frequent, the surface pale and dry, the lips livid, and vomiting, coma, or convulsions supervene, the case is nearly hopeless; though even then the efforts of the constitution, aided by diaphoretics and active purging, may ward off a fatal result.

11. With respect to treatment, Dr Ray Golding observes, that in young children he finds ipecacuanha as efficacious as tartar emetic in the allied affections of adults. Children under twelve months will bear half a drachm of the wine every two hours; if the case is urgent, the same dose every hour. Above twelve months, one drachm may be given.

The first and second doses may produce vomiting; this is of no consequence, as the copious sweating immediately produced by it is highly serviceable.

Active purging, sinapisms to the thorax, and the warm bath, must be used as adjuncts.—*British Record of Obstetric Medicine.*

79.—*Atelectasis Pulmonum.* By Dr FRIEDLEBEN.—The author attempts to show that atelectasis (the fœtal state of the lungs), is always produced by some obstacle to the complete establishment of respiration. He maintains that this pathological condition is not confined to new-born children, but is also met with in infancy.

The anatomical characters of the lesion consist of a brownish colour of the portion of lung which has not respired, and which is distinctly separated from those which have admitted air. The brown portions are hard, and do not crepitate, and sink in water. They can be artificially inflated, and in that case closely resemble healthy lung. Amongst other alterations are observed an abnormal quantity of mucus in the bronchial tubes, the foramen ovale open, the presence of coagula in the cavities of the heart, friability of the liver and spleen, injection of the cerebral vessels, and in some instances true apoplectic effusions.

The diagnosis of atelectasis pulmonum is easy, if we compare the physical with the rational signs. When the disease has lasted a few days, cyanosis always declares itself, less in consequence of the patency of the foramen ovale, than as a result of deficient hæmatosis. The author notices all the circumstances which modify the progress and termination of the malady. The latter is not always immediately fatal, but in some cases persists to infancy. It is to an attack of bronchitis in the fœtal state, that this persistance is, in the author's opinion, to be attributed; the bronchial ramifications being secluded, and the entrance of air prevented.

The anatomical differences in this case between the sound and diseased lung become very marked, the latter appearing of a dirty violet colour, like that of the cortical portion of the kidney; the pleura covering it is also thicker, and insufflation is difficult or impossible. The consecutive lesions most frequently observed are dilatations of the right ventricle, amplification of the foramen ovale, effusion into the pericardium, œdema of the lungs and cellular tissue.

The lengthened details into which the author enters respecting the anatomical appearances in atelectasis, have chiefly reference to the diagnosis from fœtal pneumonia, and are intended to prove that it is essentially the same lesion which French writers have inscribed as *carnification* of the lung.

The author thinks that he has been able to distinguish three forms of the malady. In the first, the infant has mucous râles

and cough immediately after birth, but it sucks well; later, paroxysms of coughing come on, with threatened asphyxia, and a livid colour of the face. These attacks end in abundant vomiting, and the child then resumes its wonted appearance. There is a dull sound on percussion, over several points of the chest, with a bronchial souffle; in the other portions of the lungs, mucous râles and puerile respiration are heard. After a short time the heart begins to beat irregularly, then the impulse becomes more feeble. At the same time, the lips and extremities become hard, the features swollen, and the respiration embarrassed. The fits of coughing also become more frequent and prolonged, œdema of the lungs follows, and death ensiues with symptoms of cerebral effusion.

The second form is characterized by less violence at first, but is speedily complicated with symptoms of pneumonia, and death ensues even more rapidly than in the preceding.

The third form is the most rapidly fatal. The infants at birth have a slight cough; but fever is suddenly lighted up and is accompanied with symptoms of follicular enteritis. In this form the infant appears to die of exhaustion.—*Archiv für Physiologische Heilkunde*, and *Prov. Jour.*, Feb. 21, 1848.

80.—*Employment of Cold Affusions in Typhoid Fever.*—M. Récamier's bold method of treatment, in applying cold affusions in the severest forms of acute febrile affection, has been attended by the happiest results in the wards of the Hôtel Dieu, where it has long been most successfully employed, both by himself and others. It must, however, be borne in mind, that it should only be resorted to in cases presenting a certain order of indications, and that even then its employment requires circumspection and caution. It is most especially indicated in the ataxic form, and during the last stage of typhoid fever, when we wish to induce at once a violent shock to the irregular functions of the nervous system, and an energetic reaction towards the peripheral organs. M. Tessier lately obtained the most unexpected success from this treatment, in a patient whose case appeared hopeless. Six buckets of water, at 68° Fah. were here thrown over the patient, and as the low temperature of the body gave little hope of a reaction being induced by the unaided powers of nature, M. Tessier ordered one drachm of croton oil to be applied by friction to the trunk and extremities. On the following day the patient was evidently better, and he ultimately recovered.—*L'Union Méd*, No. 116.

III.—PRACTICE OF SURGERY.

81.—*Observations on the Utility of the Double Ligature for certain Arteries.* By E. Chassaignac.—The object of this paper is not to inculcate the use of the double ligature as a general rule, but merely to point out what the author considers its benefit in certain special cases, especially in that of the common carotid. He points out, first, that when a ligature is applied to the carotid, it is subjected to a double shock at each pulsation—one direct from the heart to the artery, the other propelled from the terminal divisions of the artery towards the trunk of the vessel; in a word, he calls the first of these the direct or cardiac impulse—the second, the indirect or recurrent impulse. Admitting then, he says, that it has been shown that every ligature applied on the carotid is subjected to a double impulse on the part of the blood, which strikes against it both by the direct and indirect current, I consider this circumstance as likely to give rise to the premature falling off of the ligature and secondary hæmorrhage. Is not the means to avoid this double impulse on one ligature to apply two distinct ligatures—the one to bear the direct, the other the indirect impulse? We oppose a double resistance to a double force. But there is one particular case in which, perhaps more than all others, it is of importance to avoid the indirect impulse—that is, when a ligature is applied to the carotid, according to Brasdor's method, in a case of aneurism of the innominata. What do we propose by this method of operating?—is it not to obtain as far as possible the coagulation of the blood in the aneurismal sac? But it is known that all movement obviates this coagulation, and therefore the indirect impulse against the ligature can only be regarded as an unfavourable condition; the way to remedy it is to apply a double ligature.

As conclusions from the preceding statements, he submits the following propositions:—1. If the double ligature ought to be rejected as a principle of general rule, this practice ought not to be absolutely condemned without exception, and indiscriminately. 2. Every ligature applied to the carotid ought to be

considered as subjected to the constant action of a double impulse, the one *direct*, the other *indirect*. 3. It is useful to apply a double ligature to the common carotid, as well as to every large artery which presents a strong recurrent circulation. 4. The use of this double ligature is still more obvious in cases where the carotid artery is to be tied in operating by the method of Brasdor.—*Gaz. des Hôpitaux*, Nov. 30, 1848.

82.—*On Strangulated Hernia, and the use of Chloroform for its Reduction.* By M. MICHEL GUYTON.—The author, after stating the usual causes of strangulation, points out that the distension by gas is one of the most frequent causes of irreducibility. Irreducibility, in consequence of an accumulation of gas, is the first symptom of strangulated hernia. It is simply a gaseous tumour, which, from purely mechanical laws, comes to be tightly impacted in an opening through which it has passed; but soon the vitality of its coats comes into play, and inflammation and other secondary lesions are the natural and inevitable consequences, and these are what give hernia its dangerous and justly formidable characters. At first, reduction by ordinary taxis is possible, and generally will be easily accomplished; it depends on the force of contraction in the abdominal muscles, the degree of distension of the hernia, and, above all, on the width of the opening of communication. If one cannot always reduce it, it is owing to the difficulty of exercising on the intestine a pressure sufficient to counterbalance that of the whole abdomen: that is to say, because our force is employed upon a small extent of surface, and one difficult to compress. With chloroform, one has not to combat muscular action, the gases are quickly dispersed, and the intestinal walls collapse and readily re-enter. Further, distension of strangulated hernia by gas, permanent and involuntary contraction of the abdomen, constitute the two principal elements of strangulation; pain is only secondary—its importance lies entirely in its results, namely, the muscular contraction. Chloroform acts only on this contraction and on pain; the rings remain in the same condition—they cannot be slackened either by abolition of muscular force, which has no effect on them, nor yet by direct relaxation. Chloroform, in destroying the true and principal cause of strangulation, namely, contraction, destroys also its results: the hernia empties itself, and is reduced. It follows, therefore, that chloroform is most called for in hernia composed entirely of intestine; and that the reduction of compound hernia is more difficult than that of simple enterocele, nay even at times impossible. Chloroform might be useful in those cases of epiplocele, and entero-epiplocele where omentum predominates, by abolishing the pain produced by the various manœuvres, and that involuntary and powerful contraction of the muscles by which every organ in the abdomen has a tendency to escape. But it is no longer so direct in its influence; the omentum forms without the ring a hard solid tumour, incapable of being reduced suddenly by pressure, and, if its diameter is very much disproportioned to that of the opening, its return is quite impossible.—*L'Union Méd.*, Nov. 23, 1848.

83.—*Bad Effects sometimes arising from Taxis in Hernia.*—In speaking of the taxis, Mr Gay says, "It is difficult, and even impossible, to obtain any data upon which to calculate the proportion in the total number of deaths after strangulation, which is due to the operation of the manual attempts made to relieve it; or what share these efforts have in the production of the post-mortem appearances in persons on whom the stricture has been relieved by the knife. From the general condemnation of the taxis, almost to proscription, there is every reason to apprehend that much of the fatality in hernia is to be ascribed to it."

Arnaud recites a case in which the taxis was succeeded by suppuration of the omentum. Petit says, "Combien de fois a-t-on vu périr des malades le même jour que la réduction leur a été faite? à l'ouverture des cadavres, on a trouvé aux uns le boyau gangrèneux, aux autres il étoit crevé, et les matières fecales repandues dans le ventre." Other instances are cited by Morand, Bell, Sir A. Cooper, South, Teale, and others; and it would appear from these that the pathologic indications of injury from taxis are peritonitis, gangrene, and rupture of the intestine. "It has fallen to my lot," Mr Key states, "to see more than one case in which the patient has fallen a victim to a long and continued succession of violent attempts with the taxis. These are followed by a discharge of blood per anum from the bruised vessels of the lining membrane of the gut, which frequently exhausts the patient after the hernia has been returned."

Mr King has given a tabular view, from unpublished records, of thirty-eight fatal cases of hernia, to illustrate the causes of death, &c.; from which I make the fol-

lowing extract as it relates to the effects of taxis:—

In 1 the hernia was reduced by taxis; death by peritonitis; the gut red.

In 1 the hernia was reduced by taxis; recovering.

In 1 the hernia was reduced by taxis, sac and all; the stricture remaining.

In 6 the hernia was reduced by taxis, but ruptured; death by peritonitis.

Mr King deduces that nearly one-fourth of the deaths by hernia follow the simple taxis. In one of these cases a reduction "en bloc" was effected by the taxis; and in another, it "was the same thing but for the operation." One patient died from rupture of the bowel, whilst in the other cases death seems to have resulted from peritonitis. The rude employment of the taxis *during an operation*, is, I believe, not unfrequently the cause of death. I have seen an instance of this kind; and am led to think that when the return of the bowel is not promoted by the division of the presumed seat of stricture, and the obstacles are not clear to the operator's mind, the return of the bowel by violence is often preferred to an abandonment of the operation. But in order to rescue the taxis from the opprobrium which its abuse has cast upon it, and to illustrate the advantages which accrue from its judicious employment, I have taken the liberty to construct the following table from Mr Poland's report of the cases which were treated in Guy's Hospital during the years 1841-42:—We learn from this table, which is too large for insertion, that of 19 cases of hernia, 12 scrotal, 6 femoral, and 10 ventral, only one, a scrotal case, after strangulation had lasted twelve hours, terminated fatally. This table is an abundant plea for its employment, where there are no symptoms of inflammation or other circumstances to interdict it. The question, however, occurs in reference to the taxis, as on a former occasion in reference to delay—why, after the oft-repeated cautions against the contrary mode of its employment, is its use not more constantly limited to the most gentle, and always more successful, kind of pressure? —*Gay on Femoral Hernia.*

84.—*Statistics of the Surgical Hospital of Barcelona.*—Dr Mendoza has published the surgical statistics of the hospital of Barcelona for the year 1847. It appears from these that there have been ten amputations, three of the thigh, four of the leg, two of the arm, one at the wrist; of these two died (one of the thigh, and one of the leg). There have also been, during the same period, seven cases of stone, five of which were operated on, four adults by the bi-lateral operation, and a child of twelve years by the lateral: one only sunk, two months after the operation, from acute enteritis. Of three cases of strangulated hernia, one was reduced under chloroform when just about to be operated on; the second could not be reduced, for the hernia, which presented all the characters of a congenital entero-epiplocele, was complicated with a displacement of the elements of the cord, and adhesion between these organs; the third was in the case of a female with umbilical hernia, which terminated in the formation of two fæcal fistulæ, which were nearly cured, when a fit of indigestion gave rise to a recurrence of the urgent symptoms and peritonitis, which yielded to diet and purgative enemata. In treating fractures, Dr Mendoza employs the starch bandage. He relates a curious fact of a man who, from a wound by fire-arms, had suppuration in the parietal region of the skull; trephining was rendered necessary by the symptoms of compression of the brain. The surgeon found no effusion under the membranes of the brain. He plunged his knife into the cerebral substance, and had the good fortune to penetrate the collection of pus; but the patient sunk under suppuration in the ventricles of the brain.

Dr Mendoza relates a case of vertical dislocation of the patella of the left knee. The internal border of the patella was situated in the depression of the femur, the external border was made anterior, the anterior surface made internal, and external made posterior (?) Continued and powerful efforts were made for the purpose of reducing the patella, and carrying backwards and outwards the border which had become anterior, but in vain: the patient was put under chloroform, and passing rapidly from extension to powerful flexion of the leg on the thigh, the patella replaced itself spontaneously with a snap. The condyle of the femur had acted on the patella in the same way as the instrument invented by Guyatt and Wolff for the purpose of disengaging it.—*L'Union Médicale*, December 7, 1848.

[Mr Vincent of Bartholomews, in his late work on Surgical Practice, mentions some cases of the peculiar dislocation of the patella, mentioned above,

in which, after trying various other means unsuccessfully, he succeeded, with the greatest ease, by bending the leg, and rotating it slightly in the axis of the tibia. He refers the effect of this method of reduction to a peculiar law of muscular action. He says, "This law is, perhaps, a corollary following that principle which requires the necessity of association in the actions of muscles. What I allude to is, the overpowering strength which a muscle is brought to exert when its usual direction of action about a centre is forcibly changed. I think the best exemplification of this is, in that case of rare occurrence, the dislocation of the patella on its edge. When the patella is displaced in this way, it sets into action of the most violent kind those muscles which are the extensors of the leg. Their force is the effect, first, of that irritation which all muscles get when they are thrown out of their ordinary line of action, particularly when they are disturbed in moving round their ordinary axis or centre of motion; but still further, because, when these muscles are called upon, they act most powerfully, or, in other words, they are in the strongest action when the limb is to be straightened, as they are then to balance and support the whole weight of the body, by making a firm pillar of the extremity. Thus, in this condition, these muscles act with a power that defies all the force that human aid can call into its service. I have seen the utmost exertion quite feeble in changing, in the slightest degree, the state the bone was in. Yet we know that, in instances where one individual puts forth his whole power in muscular action, he cannot resist the strength of two or more to overcome this power, as is often seen in trials of a clenched fist, &c. The power of many men is not equal to the force of muscles in dislocations. But, nevertheless, the purpose is readily effected if we avail ourselves of the fact, that these muscles only act so powerfully when in this position, which is that they have when they usually exert their greatest efforts, that is, in the state of extension of the limb. So we have only to flex the leg a little, and all this powerful opposition to restoring the patella ceases upon using the slightest rotatory motion, and it readily falls into its place. This law of muscular action explains the great difference we find in the opposition offered to the manipulations we adopt in various dislocations."]

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In one of the cases in which he employed this treatment, the disease had been going on for eight days before the patient was seen by him. All the fingers were affected, and the whole of the hand and lower part of the fore-arm were very much inflamed, but no fluctuation could be detected. The axillary glands had become swollen and painful, and there was general feverish reaction. Pressure with the hand over the humeral artery immediately caused a cessation of the pain. The apparatus was applied so as to compress both the arteries of the fore-arm above the wrist, and no bad effects were experienced, notwithstanding the inflamed state of the parts.

The splints were directed to be removed for a short time every three or four hours. No pain was felt as long as the pressure was continued, but when it was removed the pain returned. Next morning the constitutional disturbance had quite subsided, the swelling and heat of the hand were much diminished: and after the pressure had been continued about thirty hours, all the symptoms of inflammation had disappeared.—*Bulletin de l'Académie Royale de Médecine de Belgique.*—1847-1848.

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91.—*Death from a Pistol Shot.*—At the meeting of the Westminster Medical Society, November 4th, Mr Wade related the

case of a man who placed a pistol, loaded only with powder, into his mouth, and discharged it. The cheeks were literally blown into ribbons, and the lower jaw was fractured. Proper applications were made to the parts. He appeared to be doing well for a day or two, but died suddenly, as Mr Wade believes, from spasm of the glottis, consequent upon removal to an hospital.—*Lancet*, 18*th Nov.* 1848.

92.—*Curious Case of Lipoma under the Deltoid.*—On the 20th January last, a woman about fifty-eight years of age, thin and short in stature, came to La Charité to be freed from a tumour under which she had been labouring for nearly seven years. It was on the anterior and external part of the shoulder, appearing without any known cause. It had progressively attained a considerable size, in form two-lobed, of a moderate consistence, no visible fluctuation, having an obscure and sluggish motion, no difference nor change in colour of the skin. It extended almost over the whole space occupied by the deltoid, which was not destroyed, but appeared to cover the tumour itself; the arm could be moved about with ease, and the general health was good; in fact, there was nothing but a tumour, troublesome from its size. This case was given as a subject of trial to the surgeons at the time standing as candidates for the chair vacant by the death of the younger Bérard. Some said it was in the periosteum, and of a fibro-cartilaginous nature; others gave opinions not better founded. M. Bégue alone declared it to be a lipoma, an analogous case having once before come under his notice. MM. Nélaton and Gerdy were uncertain; the latter introduced an exploring trocar into the tumour, but nothing came out; and the patient, desiring to be freed from it, M. Gerdy performed the operation as follows:—An incision, three or four inches long, extending downwards from the clavicle in the direction of the anterior border of the deltoid, laid bare a very thin layer of muscular fibres covering the tumour; nearly an inch above the inferior attachment of the deltoid, another incision, perpendicular to the first, was made, dividing the skin and the muscle itself. This incision was so made as not to include the whole of the humeral attachment of the deltoid; nearly half of this remained uninjured posteriorly. That was sufficient to enable M. Gerdy, in raising the triangular flap just made, to circumscribe and cut out the tumour without difficulty. An incision was afterwards made at the back part of the shoulder, to enable the flow of the liquid, which otherwise would have accumulated in the *cul-de-sac* formed by the posterior lobe of the tumour. The patient was thus perfectly cured of an affection which examination proved was nothing else than a lipoma, only of firmer consistence than is usually met with in practice.—*Journal de Médicine et Chirurgie.* July 1848.

93.—*Experiments regarding Gunshot Wounds of the Head.* By M. HUGUIER. — At the Société de Chirurgie of Paris, 18th October 1848, M. Huguier showed the skull of a subject at which he had fired a musket loaded with a single ball at the distance of seventeen paces; the shot had struck the temporal region near the base of the petrous portion. The lesion produced was remarkable, all the bones of the vault and base of the cranium had been broken up, the brain had escaped, and the soft parts had been torn into flaps. One not knowing its history, would call it an injury produced by a fall from a great height. After various conjectural opinions to explain the manner these injuries had taken place, M. Huguier stated that he thought that the multiplicity of injuries were owing, above all, to the fact that the ball had struck the point of junction of the vault with the base of the cranium, and had communicated to both simultaneously a violent shock.

At the Association Générale de Médecine de Paris, 6th November 1848, M. Deguise, jun., in reference to the experiment of M. Huguier stated above, said, that M. Huguier had shown a skull so curiously mutilated, that his colleagues had been undecided as to the cause producing such injuries. The fact was so singular, and so important in a medico-legal point of view, that several members, amongst whom was M. Deguise, had determined to repeat the experiment. He stated that he had obtained a similar result.—*Gazette des Hôpitaux.* Oct. and Nov. 1848.

[The explanation given by M. Huguier as to the cause of these remarkable lesions, appears to us to be a just one. Meanwhile a summary stop has been put to the experiments in question by the Minister of the Interior suspending

M. Deguise and his assistant from their functions in the hospital for the space of one year.

Perhaps the minister feared lest such heroic experiments might foster a military spirit in the profession, and considered that, in the present state of Paris, a corps of *Tirailleurs Médicals* was a thing to be discouraged.]

94.—*Observations on a Case of Popliteal Aneurism treated by Galvanic Puncture.*—M. Debout presented a specimen of a popliteal aneurism taken from a man who had been treated by galvanic puncture. He had sent the patient, who was a forest keeper, aged sixty, into the Hôpital de la Charité. M. Velpeau employed galvanic puncture, but after leaving the needles in for eight days, and galvanizing twice during that period, a violent inflammation supervened, followed by hemorrhage, for which ligature of the femoral artery was performed; gangrene of the limb ensued; amputation of the thigh was had recourse to, but with a fatal result; in the preparation their was seen a sanguineous clot filling up the aneurismal sac, which was much more inflamed on the external than on the internal surface.—*At the Société de Chirurgie de Paris.* Nov. 22, 1848; *Gazette des Hôpitaux,* Dec. 5, 1848.

[A case of this kind, though interesting in many respects, does not much elucidate the action of galvanic puncture on the aneurism; for it is a question whether the coagulation of the blood within the sac was the result of the galvanism or of the subsequent operation of ligature of the femoral artery. We think the history of the case rather indicates that the coagulation was the result of the ligature of the artery, judging from the hemorrhage which necessitated that operation.]

95.—*On the Employment of Ligatures formed of Animal Substances.* By Mr Wragg.—The substance which Mr Wragg prefers is the fibrous tissue of the deer, dried. then twisted so as to form a small round thread, smooth and regular on the surface, non-elastic, sufficiently strong to resist the traction made on it by the surgeon in tying the knot. The mode of preparing these ligatures appears to the author to be a matter of great importance, and one capable of insuring or compromising the success of the operation: These tendinous slips ought to be dried slowly, and not used until all the moisture has disappeared; the author prefers those which have been dried for some years. One objection that might be raised against these ligatures of animal substances is, that they do not determine the degree of inflammation necessary for the obliteration of the artery; but this fear must yield to the testimony of all the surgeons who have found in this practice a sufficient hæmostatic remedy. This is not the reason why it has been rejected by some medical men, but rather because they doubted whether the substance of these ligatures could be effectually absorbed, and disappear amongst the tissues; the experience of Mr Wragg fully replies to these apprehensions. During the ten years that he has employed these ligatures, he has never used any others; and during this period he has tied arteries in the fingers, hand, forearm, arm, leg, and thigh, and has never seen any symptom to show that the absorption of the knot had not taken place. Some cases, chosen from a large number, will confirm the truth of these propositions: In 1836, Mr Wragg amputated the leg of a woman above sixty years of age for a malignant ulcer; the ligatures made of the fibrous tissue of the deer were cut close to the knot, and the wound brought together; the stump was healed at the end of three weeks. No part of the ligatures could be seen; no abscess, no ulceration, indicative of the threads having acted on the tissues as foreign bodies.

In the case of a young man, one of the cutaneous branches of the posterior tibial artery was cut by a blow from a hatchet. Mr Wragg tied it with one of these ligatures, which he cut close to the knot; he then brought the wound together by four points of the interrupted suture made of a thread of the same substance. Nothing further was seen of the knot of the ligature; as to the threads used for the suture, they became softened, and, from the time suppuration commenced, had a macerated appearance, their volume diminished by degrees, so that at the end of a certain time he saw, by the effect of a gradual eating away, a segment of the circumference of the thread disappear, and at last the knot gave way just as if it had been divided by scissors.

In 1839, Mr Wragg performed an amputation at the wrist, in consequence of injuries received by a railway accident. He tied the arteries with ligatures made from the fibrous tissue of the deer. On the 12th day, suppuration being established, one of the knots became loose, and came away by the wound, but so dimi-

nished in size, and so softened, that it was with difficulty recognized; and even Mr Wragg himself declares, that he still is in doubt whether it was not a portion of sloughing tendon.

The preceding facts indubitably prove the reality of the absorption of the ligatures formed of animal substances. The following is not less interesting, as an example of the comparative effects of this kind of ligature, and those made of vegetable threads. After amputation at the lower part of the thigh, Mr Wragg tied the femoral artery and vein, the only vessels requiring ligature, with ligatures made from the fibrous tissue of the deer and cut them off close to the knot; the stump was dressed, and the wound brought together with six points of suture, two being ligatures made from fibrous tissue of the deer, the other four of hemp. At the first dressing, on the fourth day, all the wound was united except at two places, where a strong portion of fascia lata had prevented it. On the sixth day the two ligatures made from the deer came away without the necessity of being cut, whilst the four of hemp had to be cut previously to being withdrawn. The small wounds made by the ligatures of hemp were more inflamed than those made by the animal, ligature.—*South. Amer. Jour. of Med. and Phar.*, as quoted in *Gaz. Méd. de Paris*, Nov. 18, 1848.

[The absorption of ligatures of animal substances has so often formed a subject of experiment, and has so generally been found to fail, whilst in some cases bad results have followed their use, that we think the profession is likely to be very cautious in reviving the practice. At the same time, the cases narrated suggest a mode of testing their effects on an extended scale without risk to the patient; we mean, employing them for sutures, as done by Mr Wragg, and carefully watching and comparing their effects with those of the ordinary thread.]

IV.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

96.—*Renal Dropsy during Pregnancy.* By MM. Devilliers and Miquelb.—Almost all the cases which have occurred to the author were of the lymphatic associated with the nervous temperaments, very few of the sanguineous. In several cases the women had been in good or even robust health. The primiparous condition is a powerful predisponent. The author has not been able to trace the influence of damp, cold, or spirit-drinking, said to have so powerful an influence in inducing ordinary albuminuria. Most of his patients had suffered from mental disquietude. He does not agree with those who attribute any effect to the pressure of the uterus, which is only competent to the production of ordinary œdema.

Symptoms.—It is to be observed that albuminuria may occur *unaccompanied by any dropsy*, especially when it takes place not long before delivery. When present, the development of the dropsy is sometimes rapid and acute, but generally gradual. It is sometimes even limited to the lower extremities, but usually extends to the upper extremities and face, the precipitate of albumen being just as abundant in the one case as the other. The swelling may vary from mere puffiness to excessive distension, but, like the dropsy from organic causes, it is less liable to variation than simple œdema, and it very readily invades the splanchnic cavities. Whatever may have been the amount of infiltration, or the issue of the disease, the swelling usually disappears in from six to eight days after delivery. The accoucheur has rarely the opportunity of determining when the *albuminuria* first manifested itself. The period indeed seems to be variable, and by no means in relation to the amount of serous infiltration. Nor does the quantity existing in the urine bear any such relation, it being, however, generally found considerable at the approach of delivery, augmenting sensibly during labour, and even persisting awhile after confinement—gradually, however, save in cases of serious complications, diminishing until the tenth or twelfth day, when it disappears. If during pregnancy or after delivery any notable febrile disturbance of the circulation occurs, the albumen becomes proportionably augmented; and the author furnishes a curious case, in which the amount fluctuated with the paroxysms of intermittent febrile action. The same increase is observed during severe labour, at the commencement of puerperal fever or other dangerous diseases, and especially at the approach of death—and that in women who but the day before had exhibited a very small quantity. Other accidents operate critically, and give rise to the sudden disappearance of the albumen; an instance of

which is given, that occurred on the development of an abundant herpetic eruption. In scarcely any of the patients do distinct febrile paroxysms exist, and the various nervous symptoms, analogous to those of chlorosis, are often met with in pregnancy unaccompanied by albuminuria. In some cases, severe epigastric pain seemed a marked symptom.

Complications.—Examples are given of the complication of this affection with effusions into the various serous cavities; but the most important accompanying disease is that first pointed out by Lever, *Puerperal convulsion.* It is well known that some eclamptic women suffer little from anasarca, and others not at all; but it is an essential fact. that *in all cases albumen is found in their urine.* All women suffering from albuminuria do not, however, become the subjects of eclampsia; for of the twenty cases here related, only nine suffered from convulsions; and, according to the author's researches, neither the amount nor seat of the infiltration enables us to predict their occurrence, although the appearance of albumen in the urine may always give rise to fears of this. An important conclusion to be drawn from this relation of albuminuria and eclampsia, is that if the first is the source of the second, we must consider as only occasional causes of the convulsions, the distension of the uterus, the amount of uterine pain, and the various moral and physical sources of irritation regarded by various authors as primary ones. Other forms of convulsions, as *hysteria*, are not always attended with albuminuria.

Terminations. — Contrary to what is usually the case, the albuminuria of pregnancy sometimes terminates in a rapid and spontaneous cure, notwithstanding its apparent gravity. It may also pass into the chronic state; but the serious complications which attend it, and the accidents produced by it, are too often attended by death.

Prognosis.—M. Rayer observes that the albuminuria of pregnancy is comparable to that which is produced by a temporary hyperemia of the kidney, and is less dangerous and more curable than other forms of the disease. Yet cannot this be too absolutely received, for women sometimes die, when the lesions after death are found to be very slight. Nor is Lever's statement to be relied upon—that the albuminuria of pregnancy gives rise to more violent and frequent convulsions, and is more persistent, than when it appears only just at labour. There is, in fact, no relation between the date of albuminuria and the violence of its consequences. A pretty certain ground of prognosis is derivable from the diminution or increase of albumen, the persistence of this giving rise to a very unfavourable conclusion, which cannot be drawn from the mere amount of infiltration. In respect to the production of abortion, the cases of albuminuria may be divided into those occurring *without*, and those occurring *with complications.* Thus, of thirty-seven cases in the first category, in only five could abortion be attributed to the albuminuria, whereas in twelve cases of eclampsia premature labour occurred in six. The author states, as the result of his own and M. Dubois' experience, that the supposition entertained by some, that there is a connexion between the albuminuria of the mother and induration of the cellular tissue of the infant, is destitute of foundation.

Pathological Anatomy. — The author was struck with the numerous instances of disease of the liver occurring in these cases. In some of the cases examined, the kidney had undergone the changes observed in Bright's disease, but in others these were not observed, the organ being in a congested state, and almost always increased in size. While in ordinary albuminuria we estimate the amount and gravity of the renal changes by the amount of the albumen, and the extent of the dropsy, that is not the case in the present form. The only point in which the two diseases have a strict similitude is the altered composition of the blood. This disease, in fact, much more nearly resembles the albuminuria occurring after scarlatina, or that dependent upon temporary renal hyperemia, and seems limited to the period of pregnancy, which is its principal cause. This relation of cause and effect, however, is not local or mechanical, as stated by M. Rayer, but is due to a general modification of the economy, produced by an altered condition of the blood.

Treatment.—Our resources are limited by the obscurity of the indications, and the desire to avoid interfering with the progress of pregnancy. General bleeding may be sometimes resorted to, but strong purgatives seldom should, while diuretics and vapour-baths are useful. When the albuminuria is recognised, we should seek to modify certain of the conditions of the economy by ferruginous preparations. As to the induction of premature labour, with the view of preventing convulsions, the author is averse to it; for it is impossible to be certain that these will occur, and the necessary manœuvres may themselves give rise to complications that would prove dangerous to mother or child.

Threatened suffocation, from the extension of the swelling, would alone, in his opinion, justify it.—*Archives Générales*, tom. xvi. 145-62, 318-32; tom. xvii. 48-69, 287-317.

M. Miquele, after relating several cases, lays down the following rules in reference to the treatment of the albuminuria of pregnancy:—1, That the anasarca with albuminuria of pregnant women is not due to a mechanical obstacle, but to an affection of the kidney, which is shown by the early period at which it may occur; 2, diuretics and other stimuli are, to say the least, useless; 3, much trust is not to be placed in bleeding, which is to be used only as an auxiliary when signs of congestion exist; 4, the most powerful means we have of overcoming or preventing this disease is by an abstemious or vegetable regimen, while a too animalized diet, or any which much disturbs the digestive functions and irritates the urinary organs, produces or increases it; 5, when convulsions occur, opium, given in enemata, in spite of the existing congestion, is very useful; 6, large flying blisters, applied to the groins, are so likewise.—*Révue Médic.-Chirurgicale*, iii. 191-200; and *Brit. and For. Medico-Chir. Review*, No. V. 274.

97.— *Procidentia Vagina during Labour.* By DR TYLER.—Mrs ——, æt. thirty-five. Sixth pregnancy, with her last miscarried at the fourth month. Labour this time commenced on the evening of the 11th of July 1848, at 7 P.M. Soon after, a tumour making its appearance externally, accompanied with some bleeding, the friends applied to the Anglesey Hospital for advice. The gentleman who first visited her pronounced it a case of prolapsus uteri. Dr Tyler first saw her at 1 A.M. next morning, and on making an examination, felt a large pulpy tumour protruded between the labia, as large as the scrotum of a child, for which he at first mistook it; but on passing the finger around its base, he found the tip of the finger arrested at a short distance within the labia; then drawing the finger back over the most depending part of the tumour, he discovered an opening which, admitting the finger freely, led to the os uteri. The uterine orifice was pushed low into the pelvis; it was dilated to the size of a crown piece, and its margin felt thick. The child presented a head with the face towards the pubis. On ocular examination of the tumour, it appeared of a dark livid colour, its surface evidently formed of the congested mucous lining of the vagina. Dr T. reduced the vagina into its natural situation with the greatest ease, but a succeeding pain protruded it again as before. He then re-introduced it, and desired a pupil to keep up pressure on the sides of the vagina with the points of his fingers, so as to keep it *in situ* during each pain. This counter-pressure had the desired effect of preventing a recurrence of the accident; and on visiting the poor woman again, at six and a half A.M., the vagina was found withdrawn into the usual situation, and moistened internally with its natural mucous secretion. The os uteri had contracted to the size of a shilling, and its margin felt thin and rigid, so much so that Dr T. wished to bleed her, but she entreated of him not to do so, as she dreaded its effects.—*Record of Obstetric Medicine*, Dec. 1848.

98.— *Puerperal Convulsions.* By Dr MURPHY.— Dr Murphy lays down the following propositions on this subject:—

1st, Puerperal convulsions should not be confounded with epilepsy, nor with apoplexy. They agree with the epileptic attack in their physiological, but not in their pathological characters. Apoplexy is an effect of the paroxysms, which may or may not follow from them.

2d, The predisposing causes of puerperal convulsions are either an excess of blood (hyperemia), a deficiency of blood (anemia), or impure blood.

3d, The proximate causes of convulsions are chiefly eccentric causes, being the morbid irritation of the afferent nerves supplying the different vital organs.

4th, *Morbid irritation of the uterus* is the most common proximate cause of puerperal convulsions, the result either of hyperemia or anemia. Hence the division into sthenic or hyperemic convulsions, and asthenic or anemic convulsions. Under the latter head we include, not merely loss of blood, but poverty of blood, and impure blood—because the effect seems to be similar, only differing in degree.

5th, *Morbid irritation of other organs* also causes puerperal convulsions, because, during pregnancy, and at the time of labour, the nervous system is more excitable than at any other time: and hence any organ may easily be rendered morbidly irritable. Puerperal convulsions so caused are much more fatal than the former, because the nervous centre is exposed to a twofold source of irritation—the organ primarily affected, and the uterus that is secondarily excited.

6th, In the whole of these phenomena we must perceive a beautiful illustration of the reflex nervous function—the peri-

pheral nerves that supply the affected organ rapidly communicating their irritation to the spinal system, which, as an excito-motor centre, radiates the irritation over the whole of the voluntary muscles, and the muscles of respiration, in violent convulsive paroxysms. Even the involuntary muscles, as the uterus and heart, do not escape, but give every evidence of greatly increased muscular contractions.—*Med. Gaz.*, Jan. 26, 1849.

99.—*Mode of Plugging the Vagina.* By Dr Murphy.—The mode of plugging the vagina is very much governed by fancy; some use a single plug, others several separately introduced; some will employ silk handkerchiefs or sponges for the purpose, others are satisfied with common hemp. I have been in the habit of using two or three small plugs in preference to one large one, because it is necessary to remove the plug from time to time, in order to judge of the extent of the hæmorrhage, and sometimes also to relieve the urethra from pressure. If, therefore, a single plug be withdrawn, the coagula will be disturbed, and the hæmorrhage renewed; but if the outer pieces only are taken away, this will not be the case, and the extent of hæmorrhage may be judged by the degree to which these plugs are saturated: they can be replaced by others, so as more efficiently to favour coagulation. The material that I generally employ is hemp or tow; it is always easily obtained, and I think entangles the current of blood better than sponge. I have found sponges very soon become coated with a thin layer of coagulated blood, and scarcely arrest the discharge. This, however, is a mere question of personal experience; every practitioner has his favourite, and I may be allowed to indulge in this preference. When you have made the necessary vaginal examination, introduce a ball of tow loosely rolled up, and let it be applied directly to the os uteri. Let this be followed by two or three others until the vagina is filled, and support the whole of them by a napkin soaked in ice-water, and applied to the vulva.—*Extract from Lecture, Med. Gazette*, Dec. 15, 1848.

V.—PSYCHOLOGICAL MEDICINE.

100.—*On Monomania.* By M. Baillarger.—The author has devoted a clinical lecture at the Salpêtrière to the consideration of this subject. He defines monomania to be a partial insanity, resulting from an exciting passion; differing in this respect from melancholia, which is produced by a depressing passion or emotion. M. Baillarger accounts for the opinion of Foville and some other authors, as to the rarity of this disorder, by the fact, that many persons labouring under it may succeed in concealing their state from their friends and physician, until the mental derangement has become so great as to preclude the affected individuals being longer regarded as simple monomaniacs. In proof of the general correctness of this observation, he instances two cases:—The first, that of a soldier, who contended for more than twenty years against a constant and powerful desire to murder certain of his relations. Before this propensity became so irresistible, he was forced to acquaint his friends with the power it exercised over him, in order that proper restraint might prevent him from doing the mischief to which he was impelled. The second case is that of a lady, whose hallucination was of a more amiable and harmless character; consisting simply in an overweening concern about the possibility of her regarding her husband with the proper degree of conjugal devotion. This state of mind had existed for three years, to the great distress of the patient, but unattended by any further symptoms of insanity. Hallucinations of this nature are called by the author, and other French writers, "fixed ideas;" they are, for the most part, carefully concealed from notice by the subjects who are rendered so unhappy by their possession. Monomaniacs, therefore, according to the author's definition, are rarely found confined in asylums; they move unchallenged in society, and it is only when very particular attention is directed to the inquiry, that any thing like an adequate idea of the number of persons so affected can be obtained.

Causes of Monomania.—An extreme degree of mental sensibility or irritability is supposed by the author to act most frequently as the *predisposing* cause of monomania, accompanied in several, though by no means in all instances, by a limited degree of mental endowment. Certain events produce a more or less permanent impression on the minds of some individuals, which, on those of others, exercise a very slight or transitory influence;—

such individuals are precisely those in whom we may expect the "fixed ideas" of monomania to become developed. This peculiar impressibility of the mind is more common and better marked in women than in men; and in the former, more particularly, during the existence of certain physiological states proper to their sex. The *occasional* or *exciting* causes of monomania are various; among these, lively mental emotions, especially violent grief, occupy a prominent place. The author quotes several cases in illustration of this fact; of these, the following is one of the most interesting:— Augusta Strohen, when a young girl, witnessed the execution of a criminal at Dresden. The general interest felt in his fate, and the important part he played in the tragedy of the execution, made a deep and lasting impression on her mind; and the desire thus excited, of occupying a similarly conspicuous position in the regards of the public, became at last sufficiently strong to drive her for its gratification to the commission of murder. Irritation is also a common cause of monomaniacal insanity; and to this cause may be traced many of the instances on record of homicidal and suicidal epidemics. This fact illustrates the mischievous tendency of those newspaper paragraphs devoted to stories of murders and executions. A striking dream occasionally acts as the exciting cause of monomania; in this case the "fixed idea" corresponds with the most remarkable idea in the dream. A curious circumstance in the history of typhus fever, is the occasional determination of the accompanying delirium, after the febrile excitement has become somewhat mitigated, in one particular and exclusive direction. M. Louis has recorded some cases of monomania originating in this way; in which, however, the aberration was only temporary, having been corrected after convalescence was considerably advanced. Similar effects sometimes follow the delirium of the "cerebral fevers" of women recently delivered; and it is remarkable, that the insanity which remains after such attacks, which may be monomaniacal or more general in its character, is more common among women of the higher than of the lower classes,—obviously from the greater mental susceptibility encouraged by the habits and education of the former.—*Gaz. des Hôpitaux*, Sept. 1848.

101.—*On Apparitions or Spectral Illusions.* By Dr ROBERT PATERSON.—These the author defines as vivid deceptions of the different senses, especially that of sight, often assisted by external means, occurring with such a degree of distinctness as to give a temporary belief in their reality, during a state of nervous excitement, and while the circulation of the brain is in a more or less disordered condition. In other words, they are ideas or recollected images of the mind, referred to the respective organs of sense, and occurring with sufficient intensity to create astonishment, and often fear. All the senses are liable to be deceived in this way, and various substances would seem to have the power of producing these deceptions.

[The first portion of this paper Dr Paterson has devoted to a very interesting account of the conjuring up of apparitions, divine and human, in ancient times, with a statement of the means modern science has demonstrated to have been put in use for purposes of the kind. The consideration of these particulars our limited space here forbids; but we recommend to our readers a perusal of this part, as well as of the whole paper.]

Dr Paterson refers the origin of all spectral illusions to three heads, according as they arise:—First, from increased quantity of blood in the circulating vessels; or secondly, from a diminished quantity; and thirdly, from certain foreign matters circulating with it.

To the first head are to be referred the illusions of fevers, of delirium tremens, plague, of inflammatory affections of the brain and its membranes, and those probably of mania, of plethora, gout, hypochondriasis, and hysteria. To the second head are to be referred those which occur in weak excitable temperaments, after continued illness and low diet, after large blood-letting to approaching syncope, as well as some of those which take place towards the termination of phthisis, hæmoptysis, &c. To the third head may be referred the apparitions which sometimes arise from the absorption of alcohol, ether, chloroform, and substances of a like description by the circulating current, as well as the inhalation of certain gases, and, as would appear, from preparations of sulphur with oxygen and carbon; and lastly, various narcotic poisons, such as opium, belladonna, conium, hyosciamus, solanum, cannabis, and similar drugs.

Division of Spectral Phenomena. As apparitions are resolvable into ideas or images of the mind, dressed up and impressed on the bodily senses with a vividness which often creates astonishment and fear, so external means often deceive the imagination in like manner, and give rise to phenomena of a very similar kind.

They may therefore with propriety be divided, first, *into those which have their origin in the mind itself;* and secondly, *into those which are entirely referable to external circumstances.*

Under the first class, Dr Paterson has given an epitome of the published cases referable to it, followed by a relation of seven highly interesting original instances. Of the latter we select the following, the seventh case recorded, the particulars of which were communicated to the author by the affected individual:—"I was not a little surprised one forenoon, while busily musing on the probable pathology of my own and similar cases, on perceiving an extremely minute yet very distinct spectral illusion, which for lifelike reality could not, I then imagined, be surpassed. The bed-curtains were partially drawn, and the light from the windows at the time unusually excluded, conditions which probably rendered the spectral phenomena I then observed peculiarly attractive. From a somewhat obscure background, I first noticed a ray of light slowly to emerge, and, while advancing towards me, gradually to unfold itself as it were into a living, active, and altogether grotesque epitome of humanity, so extremely minute, and yet so complete in form, colour, and expression, that I was more agreeably astonished at the very distinctness of the novel and ludicrous illusion, more especially when it reached its complete development, which it seemed to do when it approached within an arm's length of me, when it suddenly disappeared, but only to make way for another and equally comic figure, which also seemed to spring forth on the unfolding of the light, that again appeared slowly advancing from the dark background already referred to. So long as my vision and attention were directed to this phantasmagoric scene, a long succession of these Liliputian comedians continued in like manner to appear, and to give the most amusing and apparently never-ending variety of character and action to the pantomime which the pigmies one by one enacted. For some time I continued to watch with intense interest the individual origin, growth, and dissolution of my tiny and short-lived visitors, and endeavoured, as one vanished, to anticipate the particular appearance which its successor would assume; but generally failed in the experiment, as each succeeding illusion presented, either in its figure, expression, or colour, something quite novel and characteristic. So soon as my particular attention was withdrawn from the imaginary camera obscura, the dark background to the exhibition for the time being, ceased; and it was not till the following day when, under the same circumstances, I again discovered more of my airy performers, with the strange antics of whom I again wiled away what might otherwise have been to me a tedious or lost hour. Their presence, when thus solicited, continued for several subsequent days, after which, however, I could no longer perceive the slightest trace of their existence, the obscure background from which their matrix (the evolving ray) used to emerge, having now also altogether dissipated. I rapidly thereafter regained my former health; and have since then, I am happy to add, remained a perfect stranger to headachs and spectral illusions." In regard to the second class, or apparitions, having their origin entirely in external circumstances, the author observes that, during twilight, external objects lose their distinctness of outline, and become dimmer to the sight, and are under these circumstances more easily passed over by an individual wrapped in contemplation. In darkness and solitude it becomes still more marked. The peculiar arrangement of light and shade, which, under certain circumstances, is produced by the sun's rays, and more especially by those of the setting sun—by the moonbeams—by the decaying embers of a flickering fire—or by the uncertain light of a dying night taper, have all had their share in producing phenomena of this class. Superstitious dread, or a certain degree of mental excitement, add materially to the effect of phenomena of this kind. A striking instance of this variety occurred to the author himself, which he thus relates,—"I was called hurriedly out of bed, on a summer night, to a patient who was said to have committed suicide. I reached the house in time to see her expire; she had divided the trachea and large vessels of the neck, the profuse hemorrhage from which had so alarmed her relations that they all fled from the house. I found her lying huddled up on a door-mat, on which she had fallen in passing from one room to the other—and on which she expired. She was a respectable, young, and good-looking woman, and her history was a most melancholy one. The details of her melancholy end were brought before my mind again and again for several weeks, in consequence of my being concerned in arranging matters with the friends. Many months afterwards I was called again professionally to the same house. It was evening, and the moon was shining brightly as I ascended the stairs; the

door of the house was opened, and to my astonishment, the first thing that my eyes encountered was the door-mat, with its dying burden as bright and distinct as when I first beheld it. I was much struck with the circumstance, and paused for a time to observe with what accuracy fancy, and the effects of the moonbeams had brought back a recurrence of the painful associations connected with my former visit. Upon reaching it, I discovered that it was merely a shawl or some clothes that had been accidentally dropped on the door-mat. It is impossible to describe with what accuracy of colour, outline, and form, this painful image was brought back; nor was it the result of my mind having recurred to the subject in approaching the house; at all events, of this I was not aware, and felt much struck when I suddenly beheld the form, as I had previously so painfully witnessed it, extended on the door-mat. Nor could I see it again as I descended the stair, although the same drapery was there, and the moonbeams fell as before. The spell in fact was broken. Imagination had no longer its full play; and, although I looked at it again and again, I could make nothing out of it but mat, drapery, and moonshine."

Thirdly.— Apparitions may have their origin in the observation of electrical phenomena or phosphorescent emanations. The faculty of seeing luminous appearances would seem to rest in individuals of a highly nervous temperament, and whose organs of sense become preternaturally acute during twilight and darkness. It must be electrical light of which such individuals become witnesses. We know that such phenomena are constantly going forward, and most people can distinguish it in the dark from stroking the backs of certain cats; and it is most probably to the same natural process that we are to refer the power which certain individuals, while labouring under various nervous diseases, possess of seeing lights from magnets and certain kinds of crystals. The author observes, that it yet remains to be explained why this power should be classed amongst the sources of apparitions. He admits his inability to adduce any examples of it, but thinks it highly probable such may occur, and be converted by such individuals into objects of superstitious fear.

Lastly.— Apparitions may have their origin in various stimulating, narcotic, and other substances introduced into the blood. —In mentioning the different substances which are liable to produce, or render the senses susceptible to the production of spectral forms, the author speaks of,— 1st, those of a stimulating kind; 2d, those of a narcotic and narcotic-acrid kind; and lastly, those arising from other substances, of which some of the compounds of sulphur and of carbon form examples. Of the substances belonging to the first class, he specifies alcohol, ether, chloroform, and the nitrous oxide gas; of those belonging to the second class, the author instances opium, tobacco, henbane, solanum, stramonium, belladonna, conium, cicuta, and cannabis Indica,—speaking more in detail of the stramonium, opium, and the Indian hemp, and of the compounds of sulphur and carbon.

In the cases of apparitions recorded, and in those detailed by Dr Paterson, the organ of sight alone was deceived in thirty-five instances; the sense of hearing alone in four; that of touch alone in none. But in three instances the senses of hearing and seeing were together deceived,—in one the sense of sight and touch combined; and in two the senses of hearing, seeing, and touch. Illusions of sight appear, therefore, most common, and the rarest is that of touch alone; of the two senses taste and smell, there is no instance on record of the illusions of either.

The author, in concluding, refers to the very curious manner in which illusions of one sense lead on to another. Thus, during an optical illusion, a very slight concurring noise seems to be turned by the individual into a sound corresponding with his other illusion, and is actually converted into an aural one. In the same way, a pain occurring during the course of an optical illusion is at once converted into a tactile one. The spectre which is seen, by a little accidental noise speaks; and by a corresponding accidental twinge of pain it grasps or wounds the individual. Instances of these compound forms of illusions are rare.—*Edin. Med. and Surg. Jour.* No. 176.

102.—*On the General Paralysis of the Insane.* By Dr JAMES M. WINN.—This paper is a critical treatise, chiefly devoted to a consideration of the opinions of M. Rodrigues, Calmeil, and Bayle, whose opportunities for observation on this subject have been very considerable. All writers are agreed that men are more subject to paralysis than women. It is rarely seen before twenty-five; increases in the frequency of its occurrence up to sixty, and then diminishes. M. Bayle has never met with it in infants. M. Rodrigues has seen three instances before the age of

fifteen. The sanguineous and robust appear to be most liable to this affection. Military men appear peculiarly liable to it. Four out of five cases in the practice of M. Calmeil occurred among revenue officers. Venereal excesses, intemperance, excessive intellectual labour, syphilis, abuse of mercury, deranged catamenia, &c. &c., all operate as predisponent agents. The exciting causes of the disease are very numerous; among these are, strong impressions deranging the impulses and affections—injuries of the head, &c. &c. As the disease is nearly in every instance fatal, it is of great consequence to detect it at its outset.

Hesitation of speech and impeded motion of the tongue are the first signs; the patient speaks with difficulty, and stops between each syllable. Some words he cannot articulate; he passes over some lightly, and lingers on others. Some patients repeat the same word several times. The tongue is protruded with a trembling motion, the mouth is not drawn to either side, but during speech there is observed about its corners a slight trembling. The muscles of the face are unaffected. According to Rodrigues, the arms are the next organs paralysed, according to Calmeil, the legs. The premonitory symptoms are sometimes intermittent, disappearing for hours or days, but only to return with fresh intensity. The second period in the progress of the disease, is marked by an increase in the severity of the symptoms; the mind occasionally becomes greatly disturbed, the patient delirous and furious on being contradicted. On this state epilepsy sometimes supervenes. Deglutition now becomes difficult, and the patient is apt to be suffocated by the food lodging opposite the larynx. The muscles of the jaw, neck, abdomen, alimentary canal, and the sphincters, successively become paralysed: the retina becomes partly insensible to light, and the sensibility of the auditory nerve is blunted. In the third period the patient is far advanced in dementia; hearing and smell are gone; speech is lost; deglutition almost gone. The legs are now unable to support the body. Respiration is short and difficult. Sensation is nearly absent. There may be constipation, but diarrhœa is most common. Emaciation rapidly ensues, and death closes the scene. M. Rodrigues thinks that the paralysis may precede the insanity, but the greater proportion of his cases appear to have been preceded by insanity. Ambitious or exalted monomania is the form of insanity most commonly associated with general paralysis. M. Rodrigues gives some interesting cases of partial and perfect recovery, quoted from various authors. Patients seldom die during the earlier progress of the disease, except from attacks of cerebral congestion. During the second stage, death is apt to occur from epileptiform attacks, and asphyxia. In the third period the patient generally sinks from weakness, cerebral congestion, disease of the lungs, and asphyxia. Apoplexy is a not unfrequent complication.

The description of the pathological appearances, as given by M. Rodrigues, is next analysed. The same vagueness which is generally observed in the description of the pathological appearances of insanity is here also present, and we have not been able to glean much information from this part of the paper.

The treatment of M. Rodrigues is hygienic and medicinal. In the first stage it is heroic, and the lancet is freely employed. The douche he considers hurtful, and the application of ice to the head equally objectionable.

In the second period, setons, moxæ, and issues, he considers useful. In the later stages of the disease he recommends external counter-irritation. Throughout the whole period of the disease most room for treatment is afforded by the complications which are apt to occur.—*Journal of Psychological Medicine.*

103.—*On Double Consciousness.* By Drs Skae and Browne.—Two instances of this diseased condition of the mind have lately been recorded. In Dr Skae's case, religious melancholia alternated with a sound state of the mind. From an early period in the history of the case, it was observed that the symptoms displayed an aggravation every alternate day. On each alternate day the patient will neither eat, sleep, nor walk, but continues incessantly turning the leaves of a Bible, complaining piteously of his misery. On the intermediate days he is comparatively speaking quite well, enters into the domestic duties of his family, eats heartily, walks out, transacts business, assures every one he is quite well, and appears to entertain no apprehension of a return of his complaints. What is chiefly interesting and remarkable in this case, is the sort of double existence which the individual appears to have. On those days on which he is affected with his malady, he appears to have no remembrance whatever of the previous or of any former day on which he was comparatively well, nor of any of the engagements of those days: he cannot tell whether he was out, or what he did, nor whom he saw, nor any transactions in

which he was occupied; neither does he anticipate any amendment on the succeeding day, but contemplates the future with unmitigated despondency; on the intermediate days, on the other hand, he asserts that he is quite well, denies that he has any complaints, and appears satisfied that he was as well the previous day as he then is. On that day he transacts business, &c. &c., and distinctly remembers the transactions of previous days on which he was well. He appears in short to have a double consciousness, a sort of twofold existence, one half of which he spends in the rational enjoyment of life, and discharges its duties; and the other in a state of hopeless hypochondriacism, amounting almost to complete mental aberration. Dr Browne's case consists of trances of two hours' duration, occurring repeatedly during each day, and yielding to a moral impression to the apprehension of being removed to the vicinity of a lunatic asylum, and to the suspicion of being regarded as of unsound mind.—*Report on Progress of Psychological Medicine, by Dr C. Lockhart Robertson, in Ranking's Abstract*, Vol. vii.

VI.—MATERIA MEDICA AND THERAPEUTICS.

104.—*Action of Tartar Emetic.* By M. BONAMY.—M. Bonamy examines, first, the action of tartar emetic on the digestive tube. He arranges the lesions of the gastro-intestinal mucous membrane under five groups—viz., injection, with or without exudation of blood; softening of the mucous membrane, with or without destruction of the villosities; ulcerations; pustules; and hypertrophy of the follicles. But even the mildest of these effects occur only in a small proportion of the cases in which the tartrate is exhibited medicinally, and, according to M. Bonamy, are never occasioned except by larger doses than are necessary to obtain its therapeutic action.

Thus, of thirty-three cases, in which he author noted exactly the state of the tongue and digestive tube before and after the medication, signs of gastro-intestinal irritation were presented in two, and in one only of these were they serious.

[The doses exhibited are not mentioned.]

On the remote or general action of tartar emetic M. Bonamy has made some careful observations; and, although he has not deduced any new conclusions, his researches are important on account of the greater precision they give to our existing knowledge.

From a table, based on twenty-five observations, in which the pulse was examined before and after the use of the drug, we find that, in twenty-three cases, the diminution in the number of pulsations observed on the day succeeding the first administration, was 15, 30, 10, 24, 40, 3, 20, 8, 10, 5, 24, 23, 18, 13, 23, 12, 10, 15, 10. In the other two cases there was no change in the frequency of the pulse. On the second and third days the slowness of the pulse was generally more marked.

Great diversity of opinion prevails in relation to the diaphoretic action of tartar emetic. Of fifty-five observations, M. Bonamy found the cutaneous secretion augmented in four cases only. He considers diaphoresis, therefore, an accidental effect of tartar emetic, probably occasioned by the sickness and vomiting, and not by the remote action of the drug. He does not show, however, that vomiting was present in the four cases alluded to.

M. Bonamy regards the marked sedation of the nervous powers, which ensues from the use of tartar emetic, as an indirect effect, consequent on the weakening of the circulation. We have always regarded the nervous depression as a direct effect, and for the following reasons:—It frequently bears no relation in degree to the state of the pulse; and secondly, it is occasionally present when the circulation is comparatively little affected.

The author's observations on the therapeutic properties of tartar emetic need not detain us. They confirm the almost universal opinion of its value in pneumonia.

In acute rheumatism he found its beneficial action much less constant and less marked than in pneumonia. There is nothing new on its use in other diseases.

Is the establishment of tolerance necessary to the efficient therapeutic action of tartar emetic? M. Bonamy replies to this question in the negative, and maintains that, in many cases where he could not obtain tolerance, the efficiency of the drug was not the less marked. He thinks that, as an antiphlogistic, it is most usefully exhibited in frequent small doses, not exceeding the fraction of a grain.—*Etudes sur les Effets Physiologiques et Therapeutiques du Tartre Stibié*, Paris, 1848.

105.—*Iodide of Potassium in the Diseases arising from Mercury and Lead.* By M. MELSENS.—M. Melsens supposes that in chronic poisoning with the mercurial and lead salts these bodies form insoluble compounds with the albumen, fibrine, &c., of the economy, and are thus retained in the system. According to him, the iodide of potassium dissolves these combinations, and the poisonous metals are thrown off by the kidneys and other secretory organs. This solution is evidenced by the fact of mercury or lead appearing in the urine of a patient suffering from lead or mercurial disease, to whom the iodide of potassium has been administered, although they had not been detected previously. Again, if a large quantity of the iodide be at once exhibited to a patient seriously affected, and whose organs probably contain a considerable amount of the noxious metal, symptoms of acute poisoning may arise from the action on the economy of the now dissolved poison. Thus in a dog, to whom, for several days, an insoluble preparation of lead had been exhibited, and who presented only slight symptoms of chronic poisoning, death resulted from a large dose of the iodide. A similar dose of the iodide was given to a healthy dog, without occasioning much derangement. M. Melsens has administered the iodide to a number of patients suffering from chronic lead and mercurial poisoning, with the effect of completely removing the painful symptoms.—*Proceedings of the Academy of Sciences, Paris, Gaz. des Hôp.*, February 1849.

106.—*Adulterations and Tests of Chloroform.* By M. DORVAULT.—[We have had occasion repeatedly to direct attention to this subject—(see *Retrospect* for 1848, pp. 19, 49, 125, and 221). The great importance of having so powerful an agent in a state of purity has induced us, at the risk of a little repetition, to lay the following before our readers.]

Pure chloroform is 1. Perfectly transparent and colourless. 2. Entirely volatile. 3. It has a density of 1·49 at the temperature of 15° Cent. 4. It has a peculiar odour resembling that of the rennet apple, and a sweet ethereal taste. 5. It is soluble in all proportions in alcohol and ether. 6. It falls to the bottom of a mixture of equal parts of water and sulphuric acid. 7. It neither reddens nor decolorizes litmus paper. 8. It does not become opaline in traversing water. 9. It gives no precipitate with nitrate of silver. 10. It does not coagulate white of egg. 11. It does not take fire by the application of a lighted taper. 12. When rubbed on the integuments it reddens, but does not vesicate the skin. The foreign substances met with in chloroform are alcohol, chlorine, hydrochloric acid, hypochlorous acid, hydrochloric ether, compounds of methyle, aldehyde, and water. One or more of these may be present from adulteration, careless preparation, or spontaneous alteration. The first three account for the acidity of certain specimens of chloroform, and probably occasion in part the serious accidents which sometimes result from the employment of this anæsthetic.—*L'Union Méd.*, Jan. 11, 1849.

107.—*Action of Nitrate of Potassa on the Kidneys.* By M. CARDON.—A man swallowed, by mistake, three ounces of the nitrate of potassa. Violent intestinal irritation, with copious diuresis, was the consequence. The first quickly subsided, and was followed by a constant desire for food and drink, with tendency to emaciation. He continued to pass from five to six pounds of water every night. The urine was found by repeated examinations to contain sugar of resin. These symptoms gradually disappeared.—*Gaz. des Hôp.*, Jan. 18, 1849.

108.—*Indian Hemp in Neuralgia.* By Dr RAHBAUM.—Having already spoken of the use of Indiam hemp in neuralgia—(see *Retrospect* for 1848, p. 184)—we are only induced again to allude to the subject on account of the extensive opportunities of confirming the utility of the medicine in this disease, which Dr Rahbaum has enjoyed in Rathenow, where, from the almost constant prevalence during the winter months of east winds, neuralgia of the head and face is a very common disease.

Dr R. has employed many remedies, but the hemp has exceeded all in efficacy. He prescribes it internally in the form of tincture. As the mode of preparing the tincture is not given by the author, it is useless to mention the number of drops which he administers. It is sufficient to observe, that he pushes the exhibition of the drug until its physiological action is sensibly manifested.—*Pr. Ver. Zeitung*, 17, 1848.

109.—*On Cod Liver Oil in Phthisis.* By Dr C. J. B. WILLIAMS.—Dr Williams has retained notes of 234 cases of phthisis in which he has given cod liver oil. In nine cases the oil disagreed, and was discontinued; in 19, although taken, it appeared to do no good; whilst in 206, out of 234, its use was followed by marked improvement, varying in degree from temporary retardation of the progress of the disease,

and a mitigation of distressing symptoms to a more or less complete restoration to apparent health.

The most numerous examples of decided and lasting improvement occurred in patients in the second stage of the disease. Even in a few days the cough was mitigated, the expectoration diminished in quantity and opacity, the night sweats ceased, the pulse became slower and of better volume, and the appetite, flesh, and strength, were gradually improved. There was generally a diminution and gradual cessation of the crepitus; the breath-sound becoming drier and clearer; but the dulness and tubular character of the breath and voice sounds seldom exhibited any marked decrease till after several weeks' use of the oil, in conjunction with counter-irritation. In several cases in which the disease has existed long, the restoration has never been perfect; even when all the common symptoms of disease have entirely disappeared, there have remained perceptible inequalities in the breath and stroke sounds, generally with prolonged expiratory sound, which is more or less tubular towards the root of the lung. "These signs," says Dr Williams, "I have learnt, by the experience of many years, not to consider as exceptional against recovery, for they appear to be dependent on the puckering of the texture, often with pleural adhesions and old deposits in the bronchial glands, so frequently found after death at the summits and near the roots of the lungs of persons who have not for many years exhibited symptoms of any pectoral disease."

In the first stage of the disease, the results seem equally satisfactory. The good effects of the oil is commonly manifested in the abatement of cough and feverish excitement, and in the improvement of flesh and strength. The physical signs of improvement are the same as those which take place tardily in the second stage, after the removal of the hard ronchi; and Dr Williams believes that the treatment by the oil, combined with counter-irritation, seems to bring back the lungs from the stage of incipient softening to that of simple deposit, which is tardier in its changes of increase or diminution, and may remain long stationary without any obvious alteration.

In the third stage, the effects of the oil are often very marvellous. The whole number of cases with one or more cavities, as indicated by physical signs, which under Dr Williams' hands manifestly improved, amounts to sixty-two. In thirty-four of these there was continued improvement up to the last reports. Eleven cases, which exhibited decided improvement for a time, have since again declined or terminated in death. Of the remaining seventeen, he has had no recent report, and does not know whether the amelioration has been permanent or not.—*London Journal of Medicine*, vol. i. p. 1.

110.—*Nux Vomica in Obstinate Vomiting of Pregnancy.* By Dr W. Hoffman. *On the External Application of Belladonna in the same Disease.* By Dr F. Loffler —In the first of the papers cited, the author recommends the exhibition of small doses of the tincture of nux vomica immediately after each attack of vomiting. A case of several months' duration is narrated, where every conceivable means was tried unsuccessfully. Decided improvement was experienced a few hours from the time the nux vomica was begun, and next day the vomiting had entirely ceased. Rademacher speaks in strong terms of the value of this treatment.—(Erfahrungsheill. 2 Ausg., pp. 180 and 412). In the second paper, by Dr L., the external application of a watery solution of the extract of belladonna is recommended.—*Bernh. u. L.'s Zeitschr.* 1. 4., 1848.

[This is indeed a very efficacious mode of treating obstinate vomiting from whatever cause it may arise. Though it occasionally fails to give relief, yet it frequently succeeds when other means have been unsuccessful. It was first proposed by Bretonneau. We had several opportunities of witnessing its utility in the wards of M. Trousseau, Hôpital Necker, Paris.]

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EDINBURGH: SUTHERLAND AND KNOX, 23, GEORGE STREET.
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MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

APRIL, 1849.

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I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

111.—*On the Structure of the Synovial Membrane Covering the Surface of Adult Articular Cartilage.* By Joseph Toynbee, Esq.—The author, after alluding to the opinions entertained by various authors as to the vascularity or non-vascularity of articular cartilage, refers to a paper, published by him in the Philosophical Transactions for 1841, in which he endeavoured to prove that articular cartilage should be classed among those animal tissues which are nourished, grow, and are liable to certain diseases, though deprived of the presence of blood-vessels. This has been confirmed by other observers.

The presence of the synovial membrane on the surface of articular cartilage, has been asserted by Bichat and Sir B. Brodie; and Henle states that the epithelium is continued in a thin layer over the whole surface. Todd and Bowman, on the contrary, say that the membrane cannot be traced on that portion of the surface which is most exposed to pressure; while they allow that it is continued over the whole surface in the fœtus. The presence

of the synovial membrane in the fœtus requires—says the author—only a superficial examination for its discovery. The interesting question then is, what becomes of this membrane in adult life. Is it absorbed, or is it worn away by attrition, or does it become incorporated and perfectly blended with the cartilage? The author considers that none of these views is correct; and states that there is no difficulty in demonstrating, fully and satisfactorily, the persistence of the synovial membrane over the whole articular surface, during every period of life, so long as the cartilage remains in a healthy condition.

If the synovial membrane, which surrounds the border of adult articular cartilage, be traced to the margin of the latter, it will be found to adhere very firmly; and on attempting to tear it from the surface of the cartilage it will often give way; in some parts, however, and that not unfrequently, a continuation of the membrane will separate from the surface of the cartilage, to the extent of several lines, in the form of a thin transparent layer. Another mode of showing the presence of this membrane, is to make a very thin flap of the articular cartilage, parallel with its surface, and then, by means of a broad pointed forceps, to draw it in the same direction as the section. As a general result of this process, a layer of transparent membrane, from two to six lines in length, will peel from the cartilage. Another mode of demonstrating this membrane, is to scratch the surface of a piece of cartilage under water, with a fine, firm needle, until shreds of a delicate membrane appear; beneath the edge of these the needle may be carefully insinuated, so as to separate the membrane in a continuous layer of some extent. The question now is, is the membrane so detached, the synovial membrane? Portions of it, from parts of a joint which are not exposed to much pressure, when examined with a power of 500 diameters, appear translucent and interspersed with fine filamentous lines, resembling in character areolar tissue. A portion taken from the central part of the cartilage, shows scarcely any of this areolar texture, and appears translucent with a nearly homogeneous structure. Adhering to its under surface, however, numerous fine points may be seen which appear to be particles of areolar tissue, that have been lacerated in the process of separating it from the cartilage. Sometimes a portion of membrane from the central part of the cartilage will show but few of these points; but on its inner surface very shallow depressions will be observed, which correspond in size and shape to the cartilage cells over which they have been placed, and against which they have been firmly compressed. At other times, a cartilage cell may be seen adherent to the under surface of the membrane. The free surface of this membrane is smooth, and presents a very fine polish, to which is owing the glistening appearance of cartilage, which it loses the instant it is denuded of this membrane. That the tissue just described is not a layer of cartilage, seems clear from its not containing any cartilage corpuscles; from its extreme tenuity, which is so great, that the membrane folds upon itself on being placed in a few drops of water; from the facility with which it is separated from the surface of the cartilage itself; and, lastly, from its being visibly continuous with the synovial membrane round the joint. The only fact that seems to militate against its being a synovial membrane, is its being destitute of epithelium. The absence of this, however, may be accounted for by the fact, of its not being a secreting membrane, and its being subject to great pressure; nor can the absence of it be deemed a sufficient reason for denying that the tissue described is synovial membrane, in the face of so many cogent reasons for identifying it with that membrane.

From these observations the author has been led to the conclusion, that all healthy articular cartilage is invested with synovial membrane, which membrane, however, differs from the condition in which it is ordinarily met with in being destitute of an epithelial covering.

In a postscript, the author refers to the fact of Dr Garrod having observed that gouty deposits in joints are covered by a fine membrane. On examining these specimens for himself, the author found this membrane the same as that which he has described in his paper.—*London Journal of Medicine*, March, 1849.

112.—*On the Origin of Sugar in the Animal Economy.* By Dr CL. BERNARD.—In a memoir on this subject the author arrives at the following results. (1.) It is now a recognised fact in animal chemistry, that during the digestion of saccharine or amylaceous matter, the blood contains sugar, and it has thence been concluded that the sugar is furnished by such food. Bernard finds that *whatever be the nature of the food, and even in animals that have fasted two days,* sugar is invariably present in the blood. Henrich is clearly incorrect to attribute the presence of sugar in the blood to the digestion of feculent matter.

(2.) Whence is the sugar derived in

fasting animals, and in those that have lived strictly on animal food, and where is it formed? On killing a dog, which seven hours previously had eaten a hearty meal of cooked meat and bones, he found that—

α. The alimentary matter contained in the stomach and small intestine had an acid reaction, and afforded no trace of sugar.

β. The fresh chyle taken from the thoracic duct yielded a milky alkaline serum in which there was no sugar.

γ. The serum, which separated on the coagulation of the blood from the portal vein, was opalescent and alkaline, and contained a large quantity of sugar.

δ. The blood taken from the right ventricle yielded on coagulation a milky alkaline serum, in which there was much sugar, although less than in the portal blood.

These results were confirmed by repeated experiments. How was it that the portal blood should contain so much sugar, while none existed in the small intestines? Considering that it must be derived from some neighbouring organ, he proceeded as follows:—He killed a dog, which some hours previously had fed on food devoid of sugar or starch; he opened the abdomen and placed ligatures (1.) on the venous branches, proceeding from the small intestine close to the intestine itself, (2.) on the splenic vein close to the spleen, (3.) on the veins proceeding from the pancreas, and (4.) on the trunk of the portal vein before it enters the liver. From the examination of the fluids between these ligatures, he found that—

1. There was no[1] sugar in the blood of the intestinal veins, any more than in the contents of the intestines.

2. There was no sugar in the blood of the splenic or pancreatic veins, or in the tissue of the spleen, pancreas, or mesenteric glands.

3. In the blood which freely regurgitates from the liver, after the opening of the trunk of the portal vein above the ligature, and in the tissue of the liver itself, *there was an enormous quantity of sugar.*

It was thus evident that the liver was the source of the sugar. But, it will be asked, how is it that sugar is found in the blood of the portal vein and its branches, for supposing it to be formed in the tissue of the liver, the current of blood should carry it forward by the hepatic veins towards the heart, and should not return into the portal vein. This objection, however, does not apply to the hepatic circulation, as it would not apply to the circulation in other parts, for the reflux of the blood into the portal vein is very easy; and may be readily explained in the following manner. In the ordinary physiological condition, the portal circulation is mainly effected by the pressure of the abdominal walls on the viscera. The natural compression being removed on opening the abdomen; and there being no valves in the portal system, the cause of the regurgitation is obvious. In a state of health it is obvious, from the preceding experiments, that there is no sugar in the blood entering the liver.

From this second class of experiments, it follows that sugar exists in large quantity in the liver, and that it is carried forward into the general circulation by the sub-hepatic veins and the *vena cava inferior* to the right side of the heart, where it is always to be found.

(3.) As a guarantee of the accuracy of the statement, that the liver is a source of sugar, the author describes the methods by which he chemically ascertained its presence, and which seem perfectly satisfactory. From the reactions mentioned, it appears to be chemically identical with glucose, although physiologically distinct from it.

(4.) Having ascertained that the sugar contained in the body is concentrated in the liver, we have further to determine whence it is derived. It may either result directly from a transformation of certain elements of the liver; or, it may be formed from certain elements of the food, and merely accumulated in the liver. As it is known that this organ has the power of localising and retaining arsenic and certain other metals, so it is not altogether impossible that it might retain sugar, which would account for its being found there, even when no food yielding it had been taken for a considerable period. The following experiments are, however, strongly opposed to the latter view.

First Experiment.—A full grown dog was starved for eight days, and then freely and exclusively fed for eleven days on boiled sheepshead. On the nineteenth day he was killed while digestion was proceeding. The blood contained much sugar, and it was as abundant in the tissue of the liver, as in the experiments previously mentioned.

This experiment was repeated three times with similar results. It is hardly probable that sugar derived from food would have been retained for nineteen days.

[1] It is stated in the French that sugar *was found*, but from the sequence this is obviously a misprint.

Second Experiment.—An adult rabbit, after a full meal of herbs and carrots, had his pneumo-gastric nerves divided in the middle region of the neck. He was found dead, but still warm, seventeen hours after the operation. Neither the blood nor the liver contained a trace of sugar. A similar experiment with a corresponding result was performed on a dog.

As a further evidence that the sugar of the blood and liver is independent of the food, M. Bernard has found it in large quantity in fœtal calves. The following are his conclusions from the above facts:—

1. That in the physiological state, diabetic sugar is a constant ingredient of the blood found in the heart and of the liver of men and animals. The author observes, that in a future memoir, when speaking of the destruction of the sugar, he will show that it may disappear before reaching the superficial veins from which blood is sensibly drawn.

2. That this formation of sugar takes place in the liver, and that it is altogether independent of any farinaceous or saccharine food.

3. That this formation of sugar in the liver commences before birth, and consequently before the direct ingestion of food.

4. That this production of saccharine matter, which appears to be one of the functions of the liver, is dependent on the integrity of the pneumogastric veins.

The memoir concludes with a notice of his search after sugar in the liver of man and animals. There are many diseases, he observes, in which the sugar disappears, and is no longer to be found in the liver after death; diabetes is one of them.

With regard to the amount of sugar in the liver of different classes of animals, he finds that in birds (the fowl and the pigeon), and in the mammalia (as dog, rabbit, pig, ox, calf, and horse), the proportion is very considerable; in reptiles (the frog and lizard), it is very slight; while in fishes (at least in the ray and the eel), there is not a trace of sugar. This disappearance of the sugar in cold-blooded animals, is dependent, as he will show in a future memoir, on the less energy of their respiratory functions.—*Archiv. Gaz.*, November 1848.

II.—PRACTICE OF MEDICINE.

113.—*Description of an Epidemic of Scarlatina which prevailed at Kœnigsberg from the month of October* 1844 *to the end of January* 1845. By Dr MŒLLER.—The author commences his interesting narrative by alluding to the peculiarity of the season during which this epidemic continued. It was characterized by a deficiency of provisions, a bad quality of the food, a scarcity of labour, by a long and severe winter, succeeded by a summer at first extremely arid, but afterwards, on the contrary, very humid. All diseases speedily presented the adynamic type. The antiphlogistic treatment could but for a short time only be employed in the treatment of inflammatory affections. The vital powers were observed to decline in an incredibly short space of time. During the whole period from the winter of 1843 to 1845, a remarkable tendency to dropsy was observable. The epidemic began in October 1844. In November and December the cases became more frequent, but without any manifestation of a malignant character. In the two following months the cases increased in number and malignancy. Tendency to the typhoid condition was observable in the greatest number of cases—there was little of fever, little of cerebral congestions, an eruption imperfectly developed, sometimes even entirely absent, little sore throat; on the other hand, the swelling of the lymphatic glands of the neck was almost never absent. Danger was apprehended from inflammation of the organs of respiration, and from the consecutive dropsy, accompanied by albuminuria and degeneration of the kidneys. In the month of March the disease was on the decline, and a change in its character had taken place; in the great majority of cases the disease was preceded or accompanied by catarrhal affections, the eyes were injected as in measles, and the sore throat had become more severe. The eruption was in general more distinct, in some cases resembling that of measles. The consecutive dropsy had become more rare. In April and May the epidemic continued to decline. In June and the two following months, the number of cases again increased, but the disease presented a mild character. From the commencement of September to the end of the year, the epidemic continued steadily to decrease; the eruption was in general less marked; the scarlatina was frequently complicated with hooping-cough; the consecutive affections were frequent in their occurrence. Of 203 cases treated by the author forty-six died. The progress and decline of this epidemic the author divides into three periods. The

1st extending to April, the 2d to August, and the 3d to the end of the year; and he then proceeds to offer some interesting observations on the different features presented by the symptoms at these periods.

In the 1st the eruption was slight, desquamation trivial. During the other periods it was brilliant; in some fatal cases of a violet hue, and desquamation was considerable. In some cases a secondary eruption was observable, and some were followed by urticaria. The degree and duration of the fever varied. In the 1st period the pulse was very frequent, but small, the thirst and heat of surface moderate. The febrile symptoms for the most part continued up to the stage of desquamation. During the 2d period the fever was much more violent, but its duration was shorter; the skin became moist, and perspirations were common during the progress of desquamation. In general the nervous system was much affected, although true cerebral congestions were rarely met with. Affections of the brain analogous to those occurring in the progress of typhus, of an adynamic type, presented themselves at all stages of the disease, and occurred in the young as well as in adults; all of the former who presented this form early in the disease, with the exception of two, died. Serious implication of the nervous system was chiefly observed during August and September.

Of the mucous surfaces, that of the pharynx was the one chiefly and most seriously affected. Next to it that of the nose and bronchial tubes. The affection of the mucous membrane of the bowels, along with diarrhœa, and that of the genito-urinary system were also noticed by the author.

The lymphatic glands of the neck and lower jaw were the most frequently affected. Suppuration and the formation of abscesses sometimes followed.

The implication of the parotid in inflammation was always a symptom of unfavourable import. After death in such cases, the gland was found encased in pale cellular tissue, impregnated with a coagulated matter more or less solid, having sometimes a consistence like that of lard, and with small cavities throughout it filled with yellow serum. The affection of the parotid ended in resolution, suppuration, or gangrene. In its treatment the author employed ointment of cantharides in the case of children, and blisters for adults. In two cases, on account of erosion of the arterial tunics, deligation of the common carotid was required. One of these cases died, the other recovered.

After inflammation of the lymphatic glands, the author directs his attention to the renal affection peculiar to scarlatina. This complication manifests itself in the second or third week of the disease, by augmentation of the fever, scanty secretion of urine, which is muddy and has a sediment, by vomiting, accompanied by pain in the epigastrium. There is little uneasiness in the region of the kidney. Dropsy first of the feet, then of the face, finally of the whole body follows. Effusion into the serous cavities, the thorax, more rarely the abdomen, supervenes. As the dropsical affection gains ground, the fever subsides, but there is always much thirst. The quantity of albumen in the urine is considerable; the urea, on the contrary, is diminished. The urine further contains a portion of the colouring matter of the blood, appearing as a red flocculent precipitate.

The author has found pneumonia frequently allied with pleurisy, to develope itself in a very insidious manner, without any assignable cause. It generally did so during the second or third week of the disease. A physical examination was always required for its detection. Dr Mœller refers to other diseases arising in the course of scarlatina, affections of the heart, &c., and concludes his very interesting paper by some observations on remedies, which, however, do not differ from those generally considered as established in the treatment of this disease.—*Gazette Médicale de Paris*, Decembre 2, 1848.

114.—*Observations on Scarlatina Albuminuria, and a short Notice on the Sequelæ proper to that Affection.* By Dr James Miller.—(Medico-Chirurgical Society of London.)—During the summer of 1848 the author observed 219 cases of scarlatina. In fifty-nine of these the disease was followed by renal anasarca; and in other ten cases the latter affection occurred without any of the ordinary outward signs of scarlatina having preceded the attack. The œdema of the face is particularly noticed by Dr Miller as a characteristic symptom. The author divides the disease into four species, according to the intensity of the general symptoms, the absence or presence of dropsy, &c. He considers the degree of albuminuria to be, as a general rule, in inverse proportion to that of the dropsy. Dr Miller includes under the name of *scarlatina renum*, those cases in which, after direct exposure to the scarlatina miasm, dropsy followed, after rigors and slight premonitory fever, but unpreceded by eruption, sore throat, or the other symptoms of scarlatina—he also includes under the same title, those cases in

which the kidney exhibits an equally morbid action, preceded by slight affection of the skin.

The epidemic the author describes was one essentially of a renal character. The author concludes his very interesting paper by a reference to the cases of inflammation of serous membranes subsequent to scarlatina—these he properly views as falling under the denomination of sequelæ.—*Medical Gazette*, No. 1106.

[To the last number of the London Journal of Medicine, a valuable paper on this subject has been contributed by Dr S. Scott Alison. In our next number we shall present our readers with an analysis of Dr Alison's observations.]

115.—*On Intermittent Fever in Young Children.* By M. VALLEIX; *Médecin de L'Hôpital Sainte Maryuerite, &c.*—On looking over these authors who have treated either in separate works or in notices in Medical journals of intermittent fevers in young children, and children still at the breast, we are astonished at the paucity of our knowledge on this subject. In a paper published in the Union Médicale of January 1848, entitled (*De La Fièvre Intermittente Chez Les Jeuns Enfans, &c.*), and which is of much higher value than all that had preceded it on the same subject, the author, Dr Ebrard of Bourg, comments on the silence of medical writers in respect to this question, stating that M. Bouchut is almost the only one who has furnished some remarks on this disease, based on the result of the cases which had fallen under his notice. In general, those French authors who have written on the disease in young children, have pursued their investigations at Paris, where they have rarely had the opportunity of seeing intermittent fever in children, and they have therefore very generally regarded the disease as a complication of hooping-cough.

The most surprising of all is, however, the negligence evinced in this respect by writers who have treated specially of intermittent fever, and who, from their acquaintance with the disease in the countries and districts where it is endemic, must necessarily have had ample opportunities of observing it in young children. But even here we find nothing beyond a few general considerations on the transmission of the fever from the mother or nurse to the child, and at most a few vague directions regarding the treatment of the disease in young children. Yet the more we reflect on the subject, the more clearly do we recognise the extreme importance of acquiring a correct knowledge of intermittent fever, especially when occurring in infants at the breast, for it appears highly probable that a number of young children sink rapidly under this disease, before its existence had been suspected by the physician.

I have not myself had an opportunity of observing intermittent fever in children at the breast. I subjoin a case which M. Louis has communicated to me, and that I purpose making the basis of some observations regarding the diagnosis and mode of treatment of the disease at that early age.

1. The subject of this case was a boy aged five months. He was a well grown child, rather pale than otherwise. The mother, who suckled him, had never had intermittent fever; his health had been good up to the time of the attack. In the beginning of the month of July, the child was taken to Havre, where he remained a week, during the whole of which time the weather was fine, and he was not exposed to any apparent cause of fever.

On the 11th of July, the evening before his removal from Havre, he had a well marked attack of fever, viz., alternation of shivering and heat, succeeded by perspiration: the following day there were no traces of fever; the child manifesting the symptoms of health, and all the functions being in a normal condition.

On the 13th the attack recurred while the child was on the journey to Paris. On the 14th M. Louis first saw him, and found the child lively and in apparent health. An occasional alteration in the tones of the voice, and a slight and occasional cough being the only symptoms observed. Auscultation and percussion indicated nothing abnormal. On the evening of the 15th the third attack occurred, and was marked by a fit of shivering which continued half an hour, and was succeeded by heat and moisture. Examination of the region of the spleen showed that the latter did not extend beyond the ribs. The mother was ordered to take three pills of sulphate of quinine of two and a half grains each, and on the following day to increase the dose to four pills.

On the 16th the attack recurred four hours in advance, and was less long and less violent than the preceding one. From the 16th to the 21st, five pills of two and a half grains of sulphate of quinine were given daily. The fever retained its tertian form, and the attacks were well marked, but while they recurred four to five hours in advance, they at the same time diminished in intensity. On the 21st there were two attacks separated by an interval of complete apyrexia. (The same treat-

ment continued.) From the 22d to the 27th the fever assumed the quotidian form—the attacks were well marked, and the intervals quite free from symptoms of fever. On the 29d the child was removed into the country to an elevated and healthy district, about twelve miles from Paris, and from that day the mother discontinued taking the sulphate of quinine. On the 27th M. Louis found the child free from fever, the skin cool, the flesh firm; but the face of a straw coloured hue, but no abnormal coloration in the sclerotic. The spleen extended beyond the ribs four finger breadths. The mother was ordered to resume the pills, and to rub the child with an ointment containing one-tenth of sulphate of quinine. Two and a half ounces of this ointment were to be used in the course of the day, that is to say, about fifteen grains of the salt.

The two next attacks were respectively much less violent than the preceding. (The ointment was continued morning and evening, and an injection ordered, containing one grain of sulphate of quinine, with half a drop of laudanum.)

The child retained *some* of the injection, and two days after its first administration the fever ceased entirely. The treatment was continued six days after the last attack.

This case appears to me to present many points of interest. In the first place we have intermittent fever in the child, without the disease being transmitted from the nursing mother; and here the question arises, if the fever were produced by a sojourn on the seashore, why should the mother escape and the child alone be attacked, at an age when it would appear, from the evidence of most writers on intermittent fever, that the disease is less common than in more advanced life? In fact, after considering the case, we are led to conclude, that intermittent fever may occur in children at the breast as well as in adults, without any appreciable cause. The symptoms presented in M. Louis's patient differ in no way from those ordinarily observed. The cold stage never lasted more than half an hour. The spleen did not extend beyond the ribs, until after many fits. M. Ebrard has found in all cases in which he was able to make a satisfactory examination that the spleen extended below the ribs after the fourth fit. But may not the augmentation of volume have been so inconsiderable at first as to prevent its detection below the false ribs? Percussion presents the only satisfactory means of deciding this point; and I do not believe that it would be attended by as great a difficulty in the case of young children as is generally supposed; for as the walls are very thin at this early age, the differences of sound will be proportionally well marked. The course of the disease seems alone to have presented some peculiarities; for here we have a well-marked tertian converted into a quotidian form of fever, after the occurrence of two fits in one day, separated by an interval of perfect apyrexia.

The most interesting point in the whole case is the mode of treatment adopted; for, although there is no novelty in giving to the nurse the specific of the disease from which a child at the breast is suffering, it is not common to adopt such a course where the nurse is herself well. The effect of the sulphate of quinine on the child in this case is very evident, and no less remarkable is the simultaneity of the advance of the attacks, and the diminution of their intensity. Are we to attribute this effect to the action of the sulphate of quinine? The question does not admit of a definite reply; but there is a probability of such being the case, from the fact of the change having succeeded immediately on the administration of the medicine. It must, however, be observed, that this indirect treatment was only attended by an imperfect result; and it was not until after the child had been removed to a purer and clearer air, and frictions of sulphate of quinine had been combined with the treatment adopted for the mother, that a cure was effected. Although I have some doubts regarding the amount of benefit derived from frictions, I do not agree with M. Ebrard in considering that they are indicated only in particular cases, but am disposed to believe that their effect is decidedly beneficial, when they are applied of a strength proportionate to the age of the patient. The question of the administration of this febrifuge as an injection for children at the breast is one of great importance, owing to the difficulty of administering quinine to children by the mouth. M. Ebrard objects to these injections on the score that they cannot be long retained in the intestines; and, although this is undoubtedly true to a certain extent, the case before us seems to prove that they can be tolerated sufficiently long to produce some beneficial result, and I therefore think that the attempt to administer them should never be neglected. Besides these means, and the administration of the medicine by the mouth, intermittent fever may be reduced in young children by the employment of baths of cinchona, &c. M. Ebrard recommends the administration of sulphate

of quinine in an infusion of coffee; but we should certainly feel some hesitation in giving an infant at the breast the quantity (one drachm) that he recommends for the purpose; and before we would venture on such a course we must receive some further evidence regarding the efficacy of a means which, it must be confessed, would more fully than any other substance conceal the bitter taste of the medicine.

The difficulties attending the treatment of the intermittent fever in children of a more advanced age are even greater than those presented in the case of infants at the breast; for when the child is old enough to recognise the taste of the quinine, under whatever form it may be disguised, the mode of treatment is attended by very great embarrassment.

M. Ebrard has observed in a certain number of cases that intermittent fever is often accompanied by more or less violent convulsions. The most treacherous form is, however, that in which convulsions constitute the sole character of the fits, and here it is of the utmost importance to ascertain whether there is a regular intermission in their occurrence, since, if such be the case, the treatment is plain.—*L'Union Méd.*, Nos. 120, 121.

116.—*On Spinal Meningitis.* By M. PIORRY.—In a recent clinical lecture at the Hôpital de la Pitié, M. Piorry called attention to an epidemic of spinal meningitis, in some respects similar to that observed at Strasbourg by MM. Forget and Tourdes. By these authors this disease was observed to prevail chiefly among soldiers, and that class of people who were congregated together in large numbers in the same localities.

M. Piorry had been called to Corbeil by Dr Liounet for the purpose of visiting certain patients then convalescent from spinal meningitis. The epidemic had prevailed in the country in the immediate neighbourhood of Corbeil, and in Corbeil itself. The patients observed by M. Liounet, manifested as symptoms, intense headach, a sense of prickling and of pain in the limbs. Percussion in the course of the spine caused much pain. Convulsions, coma, diminution of power, and sometimes paralysis of the extremities, were also symptoms of the disease observed by M. Liounet. Frequent autopsies demonstrated the existence of pus effused between the arachnoid and pia mater in the cervical region. The encephalon presented no particular morbid appearance. In his lecture, M. Piorry related the particulars of four cases, three of which terminated favourably, the fourth fatally, of these we select the first.

1. A young man aged twenty-two, retained as a prisoner in the Bastion since the insurrection of June. This patient presented the following symptoms:—pain in the neck, extreme rigidity of that part, convulsive movements of the arms; the fingers and toes were rigid and semiflexed; the maintenance of the erect position almost impossible. He complained of excessive pain in the neck and back, augmented by percussion; the sense of pain was more severe at night than during the day. There existed an evident tendency to stupor; the spleen was enlarged. M. Piorry diagnosed spinal meningitis. The treatment adopted was the application of forty leeches to the neck, blisters along the spine, and the exhibition of the sulphate of quinine. On the following day the patient was slightly better, leeches were again applied, and a purgative injection administered. During many days little sensible improvement took place. At the visit of one day, he was found in a much worse condition than on his first admission. Leeches and blisters were again had recourse to; at length convalescence was established, and ultimately a complete cure obtained.

In the examination of the body in the fatal case alluded to, the patches of Peyer in the lower part of the small intestines were congested, the last two or three exhibited superficial ulcerations. The spleen was enlarged; the brain presented nothing remarkable; the surface of the cerebellum was slightly softened at the side of the medulla, in the cervical region; concrete pus was found effused between the arachnoid and pia mater, forming a false membrane. At the inferior part of the spine, also between the arachnoid and pia mater, there existed from three to four spoonfuls of liquid pus. The substance of the cord was not softened.

In the fatal case above recorded, and in two of the others, the symptoms were in most points similar to those of the typhoid fever of France, and in the above instance post mortem examination also revealed similar lesions of the abdomen. In one case of the four, however, no typhoid symptoms were present, and there was none of the extension of the splenic dulness, loading of the colon with the air and fluid, which characterise, according to M. Piorry, the affection in question (the abdominal typhus of the Germans.) Typhoid eruption (taches septicémiques) was present in two cases, and absent in two. The symptoms referrible to the spine were the same in all the cases.

From the observations which M. Piorry himself was enabled to make, as well as from those published in regard to the cerebro-spinal meningitis by MM. Faure-Villar, at Versailles, in 1839, Chauffral at Avignon, Tourdes and Forget at Strasbourg, he concludes that the exciting cause of spinal meningitis, is to be found in the over-crowding of prisons, bastions, &c., and that the agent of its production is an unknown poison, such a poison as is believed to exist in the case of cholera and other diseases of the same kind. M. Piorry attaches considerable importance to the power of energetic treatment when employed early in the disease, in being capable of preventing a fatal termination.—*Gazette des Hôpitaux*, March 8, 1849.

[The reader will find in our *Retrospect* for July 1848, Art. 253, an account by Dr Duncan of Dublin, of epidemic cerebro-spinal arachnitis, as observed in Ireland and on the continent. We would also refer him to the article by Dr Mayne in the Dublin Quarterly Journal for August 1846, and to Dr Darby's communication to the Dublin Medical Press of the same year. The connexion of the disease in France with the symptoms and lesions of typhoid fever, is extremely interesting, and is worthy of further attention. In the limited number of post-mortem examinations made in the Irish epidemic, no abdominal lesion seems to have been found; but, as the details are not given, we have no means of judging in how far this statement expresses the real character of the disease. The tendency of the disease to attack the spinal column, without in all cases involving the cerebral arachnoid, also suggests the propriety of making the cord a more frequent subject of pathological investigation than is usual.]

117.—*Traumatic Pleuro-pneumonia.*—Traumatic lesions of the lungs are far from being invariably fatal. Thus we frequently meet with very serious cases, accompanied by circumstances against which it would, at first sight, seem difficult for the patient to struggle, which are ultimately cured without leaving any trace.

One of the gardes mobiles, a man about thirty years of age, was wounded in the chest by a ball which lodged in the lungs. A few days after his entrance into the hospital, he expectorated purulent mucus mixed with blood; there was fever accompanied by all the symptoms of inflammation of the parenchyma of the lungs. At this time the patient was on nearly full diet, but had no wine allowed him. M. Malgaigne having made enquiries regarding the circumstances from which this attack arose, discovered that one or two evenings before the expectoration came on, the man had drunk a bottle of wine which had been conveyed to him by his friends. An abscess soon appeared at the portion of the lungs where the ball had lodged, and broke into the bronchi, after which the patient expectorated pure pus.

The condition of the patient became so serious that M. Malgaigne on one occasion thought his case utterly hopeless. He was in a state of the most complete prostration. The pus had forced for itself a passage into the pleura, where a purulent effusion was formed, which escaped both by expectoration and through the wound in the chest. Notwithstanding the serious nature of these circumstances the patient recovered, and was dismissed from the hospital when in a very satisfactory state. Although not kept till his complete recovery, owing to the discovery that in addition to the wine allowed by the hospital regulations, the patient, notwithstanding M. Malgaigne's injunctions to the contrary, continued to drink wine surreptitiously conveyed to him from without.

In reference to this case, M. Malgaigne took occasion to point out that it was one of those cases which show the admirable results that may be expected from a sound constitution, and keeping the patient on a good diet. For how can the system bear up against the debility which necessarily results from continual suppuration if the diet be low? Attention is often so exclusively directed towards the organic condition of the organs, that the vital condition is too often lost sight of, although it is equally worthy of observation. It is generally supposed that where there is inflammation of the lungs the patient must be kept low, but M. Malgaigne observes here, that we should look to the state of the stomach, which is to be discovered not by percussion or palpation, but by the manner in which that organ performs its functions. If it performs its functions in a perfectly normal manner, M. Malgaigne is of opinion that the patient will invariably be benefited by a good diet, however serious the wounds may appear to be.

However much we may agree with the opinions of M. Malgaigne on the subject of the diet to be given to the wounded, it must not be forgotten that, generally speaking, traumatic inflammations of the

lungs are less severe, and less often fatal than idiopathic inflammations, a circumstance that may not have been wholly devoid of influence here.—*Gaz. des Hôp.* Oct. 1848.

118.—*Epidemic of Miliary Fever.*—This disorder, once so common, but now so unusual, broke out several months ago in Nothalten (canton of Barr), attacking principally puerperal women, and cutting off eleven out of fifteen attacked. It is worthy of remark, that a midwife, who had in succession attended the different patients, fell a victim to the disease, and that this put a stop to the epidemic. Soon after, however (December 28), it broke out at Itterswiller, a village of 490 inhabitants, and situate about five furlongs from Nothalten. This time it did not attack in general women, but, with two exceptions, young and robust men, in easy circumstances. Up to the 11th January there had been fifteen attacks in this last place—the first seven individuals had *all* died; eight remained under treatment.

It is to be remarked that the town of Itterswiller presents a very favourable hygienic condition, and that the inhabitants are in good circumstances, making habitual use of wine. There is a considerable Jewish population, but none of the cases occurred among it.

The basis of the treatment was sulphate of quinine, with the acid elixir of Haller (equal parts of sulphuric acid and alcohol).—*Gazette Med. de Strasbourg*, January 1849.

III.—PRACTICE OF SURGERY.

119.—*Removal of the Os Calcis.* By Mr HANCOCK.—At a meeting of the Westminster Medical Society, held January 6, Mr Hancock related a case of caries of the os calcis, where he operated by removing that bone.

R. W., aged twenty-four, a butcher by trade, and of scrofulous diathesis, was admitted into the Charing Cross Hospital, under Mr Hancock's care, on the 23d May 1848. He was suffering from caries of the os calcis of the right foot, with abscess; the bone was rough, but not loose. As his other leg had been removed two or three years before, for scrofulous affection of the knee-joint, Mr H. was anxious to preserve as much of the remaining foot as possible; and as the os calcis seemed the only bone affected, he determined to confine his operation to it alone. Accordingly, on the 2d of June, the patient being under the influence of chloroform, Mr. H., assisted by Messrs Avery and Canton, removed the bone, by carrying an incision from the posterior angles of the inner malleolus, across the sole of the foot, to the external malleolus, the convexity of the flap looking forwards. The flap thus made was carefully reflected, the tendo-achillis divided, and the knife being carried from behind forwards, between the astragalus and the os calcis, the latter was dissected out without any difficulty. Two or three vessels were tied, and the flap brought over; the edges were united by sutures and strapping. All went on very well until the 6th, when erysipelas came on, along with severe constitutional disturbance. On the 9th a large portion of the flap sloughed; and it eventually came away. On the 16th only sufficient skin remained to cover the bones completely. The patient continued to improve until the middle of July, when he was again attacked with erysipelas; several abscesses formed both in the foot, above and below the wound, and in the leg and ham; his strength gave way, and he became very low and weak, and it was very evident that there was very little probability of the limb being saved; but Mr H., being anxious to give him every chance, determined to try the effect of the protein, so highly recommended by Mr Tuson; this was accordingly given in doses of fifteen, afterwards increased to twenty grains, thrice daily. His general health improved, but the foot did not mend; and at length constitutional symptoms returning, and further delay appearing dangerous, Mr Hancock removed the leg, at about five inches below the knee, on the 6th October—four months after the former operation.—*London Medical Gaz.*, January 19, 1849.

120.—*Opinions as to the proper Period of operating for Harelip.*—Dr Mason Warren has recently published a paper, confirmatory of a recommendation he had formerly given, that infants should undergo this operation at as early an age as possible, he having frequently resorted to it twenty-four hours after birth, and with better success than in older children. This arises from the less resistance offered by the child, and the great rapidity of the healing process at that age enabling it to

suckle almost as soon as if nothing abnormal had been present.

In *double harelip*, complicated with fissure of the bones and a projecting tubercle, he operates on one side first, and allows that to heal; for, if both sides be operated on at once the tissues are too much stretched, and suppuration occurs. If one side has united, and a month be allowed to elapse before the second operation, the protuberant intermaxillary bone will be found to have become more or less drawn into its place. Sutures are very preferable to needles, however wide the separation may be; for they can be more easily introduced, cause less irritation, and can be removed in from forty-eight to seventy-two hours, without disturbing the tender adhesions. They allow the part to be inspected, and any excess of inflammation to be kept down by wet compresses; so that, after their removal, the line of adhesion is often free from redness, and, after a short time, is hardly perceptible. The suture needles are most conveniently passed when straight, and sometimes by seizing them firmly with the forceps.—*American Journ. Med. Science*, No. 30, pp. 337-8.

Dr Anselm states, that a long experience has convinced him that the practice of immediate operation, put into force by M. Bonfils, of Nancy, is the best—the child then sleeping much, wanting little nourishment, possessing only an imperfect sensibility, and offering less resistance. The longer the operation is delayed, the less perfect is the adaptation attainable, for the two segments are never developed exactly alike. The imperfect sensibility of the child is so far from favouring, as stated, the occurrence of convulsions, that these are of far more frequent occurrence in older children. The child may easily be nourished for the first three or four days with a teaspoon, and after then it will suck with ease and safety. Much disappointment in this operation results from neglecting to divide the adhesions of the lip to the gum, without which exact coaptation cannot take place. After the operation, constant surveillance of the child by two attendants, during seventy-two hours, is requisite. Each of these, in turn, constantly maintains the parts in exact apposition, by gentle pressure of finger and thumb; for in this way alone can the consequences of the movements of the face be guarded against.—*L'Union Médicale*, No. 76.

M. Guersant observes that there are three periods at which this operation may be performed with different chances of success. The best chance is offered when it is performed within the first fifteen days. Later, we succeed less often, owing to the indocility of the child—its crying, eating, &c., preventing also accurate union. Later still, when the child has reached from ten to fifteen years, we may reason with him, and again operate with more success.—*Gaz. des Hôp.*, No. 75.

In addition to the above, we may observe that M. Paul Dubois likewise, some time since, expressed a strong opinion in the Académie in favour of operating, in simple cases, upon very young infants. He uses very fine insect pins; and, as those usually found in the shops are too long, and bend before the tissues, thus increasing the pain and duration of the operation, they should be shortened before passing. After twenty-four hours the first threads are to be replaced by others, less tightly drawn, such change being repeated daily, and much diminishing the inconvenience produced by the pins. The upper pin may be removed after the seventy-second hour, and the lower one from the eightieth to the ninety-sixth, according to the solidity of the union, which should then be found complete. The children are suckled as usual after the operation, which M. Dubois regards as important for their welfare, and preventive of cries and struggles. He has never met with hemorrhage after the operation, and he believes the best security against this is the bringing the pared surfaces into accurate contact, and the avoiding making incisions into any other part than the lip itself. The detaching from the gum the portion of lip which is nearest to the upper angle of the wound, for the purpose of rendering approximation easier, is in his opinion unnecessary, as the naturally yielding character of the part allows of this being effected.—*Brit. and For. Medico-Chir. Rev.*, Jan. 1849.

Mr Bransby Cooper says:—"For my own part I agree entirely with Sir Astley Cooper in regarding it as unsafe to operate upon infants before weaning—firstly, because, from their excessive irritability, they are totally unable to sustain any loss of blood; and secondly, because, after the operation, they are rendered incapable of sucking; and, indeed, Sir Astley has pointed out in his lectures the frequency of the failures he met with in his own practice in operating upon infants shortly after birth. I consider the best time, under ordinary circumstances, to be soon after the child is weaned, as it is then capable of receiving nourishment independently of its mother, and has overcome the distress incidental to the separation from her.

"At a more advanced age, as the development of the upper jaw increases in proportion to the growth of the teeth, the deformity is very much aggravated, particularly in cases of complex harelip. In addition to this, children of five or six years old can offer resistance during the operation, and are also less patient under the restrictions necessary during the progress of reparation.

"The twisted suture is, I think, preferable to the interrupted; but, from what I have seen of the practice of my colleague, Mr Cock, I am led to consider the uninterrupted suture better than either."—*Med. Gaz.*, June 23, 1848.

121.—*Employment of Collodion in Fistulous Openings.*—Dr Yvonneau, of Blois, relates the following case:—A little girl, five years old, was brought to him, whose right cheek was totally perforated very near the commissure of the lips, in consequence of an abscess which had burst externally (and which had, very neglectfully, not been opened early within the mouth). Both the upper and lower jaw were attacked by caries, and the cheek had formed adhesions with the gums. The part had the shape of a funnel, the apex formed by a fistulous opening, about half an inch in diameter, through which the saliva and the liquid taken into the mouth were dribbling. The continual loss of saliva gave the child an inordinate appetite, in spite of which it was wasting very much. The breath was also extremely fetid. He operated on the eleventh of October, in the following manner:—After having rendered the child insensible by chloroform, freed the adhesions, and removed a portion of the lower jaw which was detached, he then included the fistulous opening in two semicircular incisions, and brought the lips of the wound together. These were kept in contact by a twisted suture upon four needles and strips of adhesive plaster, and a roller around the chin finally contributed in keeping the parts steady. The third day after the operation he perceived that portions of the liquid which the child drank found their way through the fistula as previously; the parts had ulcerated upon the needle, and the fistulous opening was larger than before. Puzzled and annoyed at this failure, he bethought himself of using collodion, which he had employed before with benefit in the place of dextrine for applying bandages to fractures. He obtained perfect stillness in the child by chloroform, and the margin of the wound being exactly brought together by an assistant, he placed strips of very good adhesive plaster across it in an imbricated manner, which included the chin, the cheek, and the ala nasi, and by means of a camel-hair pencil he covered the whole with a layer of collodion. He expected thereby to render the plaster not only thoroughly adherent, but impermeable to the saliva. Three days afterwards he was obliged to remove the dressings, as the child had amused herself by pulling off a strip, and in doing so he was very agreeably surprised to find the wound covered with granulations, and the fistulous opening reduced to a line or two in diameter. The dressings were re-applied in the same manner as above, and not interfered with for the five following days, when he found, instead of the ugly opening a clean linear cicatrix. Dr Yvonneau says, "The collodion has evidently been of very great service here, for not only did it prevent the imbibition of the dressings from capillary attraction externally, but also effectually prevented the saliva from coming in contact with the external part of the wound, and thereby favoured the formation of granulations in the latter. Is it not probable that strips of adhesive plaster thus applied will very conveniently replace the needles in the operation for hare-lip?"—*Union Médicale* and *Lancet*, Dec. 23, 1848.

[Dr Yvonneau, while he appears to us to be right in ascribing much benefit to the collodion in the case he relates, seems to forget that there is one most important point of difference between the treatment for promoting adhesion in cases of harelip, and in the cure of salivary fistula. In the former, it is absolutely essential to a perfect cure, that the whole thickness of the margins of the lip be kept in accurate contact; any gaping of the internal mucous surface would be hurtful. In operations for salivary fistula, on the other hand, all that is wanted is accurate contact of the cutaneous margins of the wound; gaping of the deep or mucous surface instead of being hurtful, is positively useful, by redirecting the saliva into the mouth, whilst the external accurate apposition of the cutaneous margins of the opening prevents its passage outwards; and on this principle, indeed, almost all the operations for remedying salivary fistulæ are founded. It is well known that there is greater risk of salivary fistulæ resulting from wounds, where the division of the cheek is only partial, than in those cases where the wound divides the mucous membrane freely, if care be taken to close accurately

only the cutaneous wound, so that the saliva may flow more readily into the mouth than by the external opening. Now, no plasters, however adhesive, can act equally on the deep and superficial parts of an incision; for, whilst they bring and keep the cutaneous margins in accurate apposition, the posterior gape open; and hence the very reason which would induce us to use collodion plaster as an adjuvant to suture in cases of salivary fistula, prevents us anticipating favourable results from its use in cases of hare-lip.]

122.—*On Valvular Obstruction as a Cause of Retention of Urine.* By M. Mercier. In the *Gazette des Hôpitaux* for the 23d and 27th January, there appeared two papers on the remedial measures for retention of urine in old people. M. Mercier states that his researches have shewn him that the cause of retention in these cases, is what he terms valvular obstruction, which he divides into two kinds, muscular and prostatic; the former, he states, arises from the anatomical arrangement of the muscular fibres at the orifice of the bladder presenting, even in their normal condition, a transverse elevation of the mucous membrane covering them; this, he states, increases to such an extent in old people, as to present a true valvular obstruction; and to remedy this cause of retention, he proposes incising the valvular elevation at several points by means of an instrument of the form of the ordinary short curved sound used for exploring the bladder, and containing a small cutting blade which can be projected for the purpose of incising the valve, after the instrument used as an exploratory sound has ascertained its size and position. He states, that at first he tried excision of the projecting portion, but found this means uncertain, and that he now finds deep incisions across the structure of the valve perfectly sufficient. If no accidents occur during the first few days, he applies no other treatment (nothing is said of what these accidents may be), except for the purpose of preventing hemorrhage, which has occasionally though rarely occurred; he recommends that the bladder should not be allowed to be empty, and therefore directs the use of injections of cold water; he finds the presence of the urine sufficient to prevent too rapid union of the incised edges.

By the term prostatic valvular obstruction is meant, the enlargement and projection of the middle lobe of the prostate. For the cure of this cause of retention, it is proposed to twist off or break down the projecting portion. This is effected by means of the lithotrite of M. Jacobson, which consists of two branches enclosed in a sheath; the branch corresponding to the convexity of the curve is formed of separate portions articulated together, so that when the blades are projected from the sheath, the articulated branch forms a sort of noose; when the instrument is closed it presents the appearance and serves the purposes of an ordinary sound. For the operation at present in question, the instrument introduced closed, is used as a sound, and when the valvular projection of the prostate is felt by it, the instrument is opened, the blades are projected from the sheath, and the enlargement of the gland is seized in the noose, and then by drawing back the blades within the sheath, the instrument is closed, and the valvular tumour either twisted off or broken up into fragments which become decomposed in the bladder and pass off with the urine. The only after treatment adopted is the injection of cold water into the bladder to prevent hemorrhage.

It is also mentioned that M. Mequel d'Amboise has obtained favourable results in such cases by the employment of a method at once ingenious and *very simple* (save the mark!) This simple measure consists in taking six small leaden pellets of a conical form, the base of each being about two-fifths of an inch in diameter, and to the apex of each is attached a long and delicate stalk of very flexible iron wire; these are introduced one by one into the bladder by means of a silver catheter open at both ends; and this being effected, the catheter is withdrawn. The operator then unites all the flexible iron wires which project at the orifice of the urethra, and by drawing them towards himself, he pulls all the leaden cones into a mass at the neck of the bladder; this he does with the intention of causing compression of the enlarged lobe of the prostate, but, according to Mr Phillips, it would seem probable that the glandular projection is entangled amongst, and crushed and torn by, the forcible collection of the leaden cones. When the operation is completed, the cones are pushed back into the bladder, and then removed one by one by means of the attached wires.

123. — *Staphyloraphy.* By MM. Gerdy and Ferguson—M. Gerdy, at the Académie Nationale de Médecine, brought forward a young lad of fifteen, on whom he had performed the operation of staphyloraphy, and whose pronunciation was entirely re-established. The cleft-palate in this patient, he stated,

was so large, that the thumb could not cover the opening; there was no separation of the bone. Pronunciation was painful, and very imperfect. The fault of pronunciation was principally on the consonants, especially on the c, s, j, ch, n, b, in fact the whole of the consonants were very much altered from the air escaping by the nostrils. The sounds were so very confused, that the person could hardly be understood. At present the patient is cured, with the exception of a very slight embarrassment, the results of previous habits of speaking: at the same time, the deglutition of fluid, formerly accompanied with difficulty, is now quite easy. M. Gerdy made use of the ordinary process of refreshing the edges; but in place of the interrupted suture, which he always thought bad, from its forming a ring, the pressure of which brought on sloughing of the part, he preferred the quilled suture, which forms only a half circle, and does not strangulate the approximated portions. Instead of quills, he used two small pieces of liquorice root, moistened in warm water; he removed the first thread on the 6th day, and the rest on the 7th. M. Gerdy attributed the success principally to the employment of the quilled suture, which he considers preferable to all others for this purpose.—*Gaz. des Hopitaux*, Oct. 1848.

Mr Fergusson, in his paper on cleft-palate, after describing his plan of operating, by dividing the fibres of the palato-pharyngeal and levator muscles, before bringing the cut surfaces of the cleft-palate into contact, makes the following remarks with reference to the sutures:—

"I still retain the opinion that there is no better mode of introducing the stitches than by means of a slightly curved needle, set in a handle. The point of the instrument, armed with a smooth round waxed silk thread, is passed from below upwards, about a quarter of an inch from the cut margin of the fissure, and made to appear in the middle of the gap, when the thread is seized with forceps, drawn three or four inches out of the mouth, and then the needle is withdrawn. A similar manœuvre is followed on the opposite side; the two threads are then tied together by the ends which have thus been drawn out at the mouth, and, by withdrawing one of them, the other will be carried through the aperture opposite to that where it was first introduced. Hitherto the thread has been double: now, one end must be drawn through the apertures and out of the mouth, and so the thread is ready to be tied. Two, three, four, or five threads are introduced in this way, and then after the cut margins of the flaps are sponged free of blood and mucus, the various threads are fastened.

"In my early operations I generally made a simple knot; or, by turning the thread twice over, made that called the 'surgeon's,' in accordance with the advice of Professor Smith of Maryland. The object of the double turn is to prevent slipping until the completion of the knot. If there be no great muscular spasm, there is seldom any trouble from slipping; if there should be, the twist first made should be held firm with the point of the forceps, or else a favourable opportunity, whilst the parts are very quiet, must be taken to effect the manœuvre. But in preference to such plans, I have latterly adopted a method which I have found to be most satisfactory. A loop is made with a single turn of one end of the thread, the other end is then passed through it, when it is drawn so tight as just to permit the thread within it to slip along on the application of moderate traction. The loop can now be slid up to one of the apertures in the palate, and the cut edges being accurately adjusted, the whole can be kept *in situ* by tying a common knot on the thread close upon the loop. By taking care that the thread is very smooth on the surface, and regular in size, and by drawing the loop with proper firmness, slipping will rarely occur. But, indeed, it is one of the advantages attending my mode of operation, that there is less trouble at this part of the proceeding, than when the muscles are left entire in their natural condition.

"The degree of tightness to which the stitches may be drawn, has often been a puzzling point with me. It has been remarked, that ulcerations frequently take place in the site of the ligatures; and this has been attributed to their tightness. I have no doubt that this is the cause; but if the pressure do not actually strangulate the parts, I believe that no permanent harm will result. If the edges of the fissure are not kept together with some degree of firmness, there is a risk of saliva, or mucus, getting between and preventing union. On the other hand, if all the threads were drawn so as to endanger strangulation, the whole extent of the margins between the threads might slough. On the whole, a moderate degree of tightness should be preferred, rather than that the edges should be kept asunder by saliva or mucus. I have, too, had difficulty in determining the time to remove the stitches. In some of my early operations they were all taken away about the forty-eighth or fiftieth hour; but

latterly I have permitted them to remain longer. I believe that the adhesions are so readily broken on the second or third day, that it is best to permit all, or, at any rate, the most important ligatures, to remain over those dates, in case of any dangerous force being applied at this important period. It is better, in my opinion, to let the threads remain several days too long, than that they should be removed a minute too early.¶ ¡Usually I take one or two stitches away on the third or fourth day, and on the fifth or sixth, remove them all. It is better, I think, to take them out at intervals, than all at once."—*London Journal of Med.*, Jan. 1849.

IV.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

124.—*Tapping for Dropsy of the Amnion.* By Mr Lawrence.—The following is an abridgement by Mr Lawrence, from his note-book, of a twin case in which abortion took place, and in which there was a great excess of liquor amnii :—

"Mrs ——— is four months gone in third pregnancy. At the end of the second month, she seemed larger than in due proportion to the period of pregnancy, but there was no abdominal pain, and the general health was good. The only peculiarity was, that the sickness incident to her state was much more severe than in either of her former pregnancies. About six weeks ago (between the second and third month) she began to experience frequent pain in right lumbar and umbilical regions, which still persists. Her size, since the occurrence of the pain, has been rapidly increasing, and now she presents the appearance of a woman at the full period of utero-gestation. Fluctuation is well marked over the whole abdomen. Diagnosis, 'Pregnancy with ascites.' With the view of removing the latter, she was placed under the usual treatment, and, failing to derive any benefit from it, after eight or ten days I met a medical friend in consultation on the case. He concurred in the diagnosis, and in the pending necessity for the performance of paracentesis. This operation was accordingly performed on Saturday at mid-day, and about six pounds of straw-coloured fluid were withdrawn. The stream through the canula was never full, and never clear, being always more or less tinged with blood; frequently it was altogether interrupted by a substance which felt soft and spongy when turned aside by the probe, and from which hemorrhage to the amount of five or six ounces proceeded. For some time before the canula was withdrawn, only blood flowed through it. The hemorrhage having ceased, the canula was withdrawn, and the wound closed. The size of the abdomen was not one half reduced by the operation.

Second day.—Passed a good night; but, between eight and nine this morning, after a little exertion moving round in bed, there was slight hemorrhage per vaginam, followed by rigor and quick pulse, but no abdominal pain. At five P.M. I was summoned suddenly to the patient. About an hour previous, while turning in bed, the membranes burst, and an immense quantity of water was discharged. The bed was literally flooded. In half an hour after this discharge, labour pains came on, and ere I arrived two female fœtuses were expelled, and the half of a double placenta. I delivered the remainder. The quantity of blood lost was trifling. The fœtuses seemed to have been between the fourth and fifth month, and the membranes were of very great size. The uterus was quite contracted, and the abdomen now reduced to its natural dimensions. There was a little febrile excitement for a few days after this; but subsequently the case progressed favourably, excepting that suppuration in one of the mammæ retarded recovery for a time.

"A case very similar to the above is recorded by Desmerais, and quoted by Dr Davis, wherein the same error of diagnosis was committed, and the same treatment pursued. Twenty-one days, however, elapsed between the tapping and the occurrence of labour, whereas in the above case the interval was only about twenty-eight hours. Desmerais' case, like my own, was one of twins, and so also was that of M. Devilliers.—See *Dr Davis's Obstetric Medicine.*

125.—*The Use of Ice to promote Uterine Contractions.* By Dr Louis Mackall.—Dr Louis Mackall, a highly respectable physician of Maryland, in a communication to the committee of the American Medical Association, states, that for several years past he has been in the habit of employing pounded ice in cases of suspended or protracted labour. That when this had been swallowed freely, the pains had immediately returned, the uterus had

contracted strongly, and the labour been speedily completed.

He also communicated letters from Dr B. Mackall, Dr Skinner, and Dr M'Cubbin of Maryland, strongly corroborating his statement of the efficiency of ice in promoting the contractions of the uterus.

Dr B. Mackall remarks, that his experience in the use of ice for this purpose extends through a period of ten or twelve years. "During that time," he says, "I have had frequent opportunities of observing its effects, and I can safely declare, that in no single instance have I been disappointed in its action. I have used it under a variety of circumstances, and always with the most satisfactory result. In cases where labour pains had been suspended for twelve or twenty-four hours, they have been renewed promptly and efficiently. In cases of inevitable abortion, where the uterine contractions are feeble and inefficient, and where hemorrhage is considerable, I regard it as invaluable. In retention of the placenta from imperfect contraction of the uterus, and in cases of alarming hemorrhage after delivery and expulsion of the after-birth, it is equally applicable. In short, wherever the firm contraction of the uterus is desirable, that object will most certainly be attained by the administration of ice." In no instance have I witnessed the slightest ill effect from its administration.

Dr Blackburn of Barnesville states, that he has used a strong decoction of the roots of the cotton plant in two cases of labour, with successful issue, to promote uterine contractions where ergot had failed.—*Transactions of the American Medical Association*, vol. i. p. 234.

126.—*Abdominal Sections.* By Dr CLAY.—The following is a table of forty cases in which the abdomen was laid open by Dr Clay. It includes his whole experience :—

No. of Cases.	Nature of the Disease.	No. of Deaths.	No. of Recoveries.
1	Large fleshy tuberculous tumour of uterus	1	0
1	Extensive uterine disease, with disease of both ovaries	1	0
1	Large ovarian disease, with uterine disease	1	0
32	Ovarian tumours . .	10	22
5	Exploratory incisions	1	4
40	Total cases .	14	26

127.—*Treatment of Uterine Catarrh by Intra-uterine Injections.* By M. STROHL.—The practice of injecting liquids and unguents of various kinds into the cavity of the uterus has frequently been proposed and had recourse to, but the beneficial effects of this mode of treatment, when properly pursued, have never been fully appreciated. The rules which M. Strohl lays down are, *firstly*, to inject only a small quantity of the liquid, and, *secondly*, to provide that the canula through which it is injected be so small as not completely to close the os uteri, but allow the liquid to flow back out of the womb, after its cavity is filled. By attending to these rules the danger pointed out by M. Lisfranc, of pushing the liquid through the Fallopian tubes and into the peritoneal cavity, will be altogether avoided.

The injections may be of very various composition. M. Strohl frequently uses a weak solution of the ioduret of iron. The operation of injecting may be repeated every day, or, better, every third or fourth day ; and they must be laid aside some days before the appearance of the catamenia. In cases complicated with acute or subacute metritis, the injections cannot be safely tried. M. Strohl believes that induration and excoriation of the uterine neck are often caused or kept up by the uterine discharge, and that in these cases the uterine injections are indicated.—*Gazette de Strasbourg*, 1848.

128.—*Bichloride of Mercury in Cases of Hypertrophy and Displacement of the Womb.* By Dr OLDHAM.—The use of the more powerful preparations of mercury in the acute inflammatory affections of the uterus, or where the signs of a true chronic metritis are present, carried to the extent of salivation, is well understood ; but the value of the milder forms of mercury, given in small doses, and continued for a length of time, in gradually absorbing and reducing the thick dense texture of a massive hypertrophied womb, is not, I believe, justly appreciated. The oxide of mercury, and Plummer's pill, are amongst the mild preparations which I allude to ; but the solution of the bichloride of mercury possesses some positive peculiar advantages in the facility with which it may be combined with other remedies, which, in my estimation, give it a decided preference. It commonly happens that the health of females labouring under chronic hypertrophy of the body or the neck of the womb, suffers materially ; and a reasonable fear might be entertained that the protracted employ-

ment of mercury would tend to increase this constitutional feebleness. But, by combining the bichloride of mercury with any of the vegetable tonics, or a chalybeate, it will be found to promote and invigorate the general health, whilst its influence in reducing the hypertrophied tissue is sustained. It is this power of combination which renders it so suitable and efficacious in diseases of the uterus; and it (viz., the solution) may be given in doses of one or two drachms, twice in the day, for three, six, or even twelve months, to delicate females, without injuriously affecting them. It is a perfectly manageable remedy, and very rarely salivates, unless given in large doses, or the patient be excessively susceptible to the influence of mercury. For the last two or three years I have employed this remedy extensively, both at the hospital and in private practice; and the positive amount of good which it accomplishes, with the very trifling amount of evil, has led me to attach great value to it. The reduction of a large and indurated womb is generally slow, and the time which it takes varies extremely in different cases. In some cases the effects are comparatively speedy, and six or eight weeks will suffice to absorb and soften a considerable hypertrophy. A recent case occurred at the hospital, in which the patient had a heavy uterus retroverted, and the angle at which the cervix jutted out from the body was so acute as to give the impression, though erroneous, of a distinct flexion, to which the attention of the clinical clerk was particularly directed. In this case the uterus was greatly reduced, and spontaneously restored to its place, after she had taken the medicine eight weeks. In others a much longer period is necessary, during which the uterus becomes more free and moveable, and, as it diminishes in bulk, its malposition is less and less apparent. If the bowels are torpid, a little tinct. rhei may occasionally be added.— *Guy's Hospital Reports*, Oct. 1848.

V.—MATERIA MEDICA AND THERAPEUTICS.

129.—*Chemical Characters, Composition, and Tests of Cod-Liver Oil.* By Dr PEREIRA.—Some of the fish-oils of commerce are obtained exclusively from the liver, others are procured from the adipose tissue diffused through the body of the animal generally. In the former, therefore, we are prepared to find bile constituents which are not obtainable from the latter.

In fishes, properly so-called, the distribution of oil in the body of the animal is not uniform. In the *Gadidæ* or Cod-tribe (common cod, dorse, coal-fish, pollack, burbot, ling, torsk, &c.), in the *Squalidæ* or Sharks, and in some other fishes, almost the whole adipose tissue of the animal is concentrated in the form of oil contained in the liver. On the other hand, in the salmon, herring, sprat, and wolf-fish, the oil is more diffused through the body of the animal, and the liver is, comparatively speaking, devoid of it.

The oils obtained from the livers of the different species composing the tribe *Gadidæ*, appear to be very similar in their physical and chemical qualities, and there is good reason for believing that they agree in their medicinal properties. To all of them the term *oleum jecoris aselli*, *oleum jecoris gadi*, or *cod-liver oil*, is indiscriminately applied, though it is commonly used, especially in this country, to indicate the oil procured from the liver of the common cod (*Gadus morrhua*, Cuv.)

De Jongh in his *Disquisitio comparativa chemico-medica de tribus olei jecoris aselli speciebus*, published at Leyden in 1843, states that the Bergen (Norwegian) oil is principally obtained from three species, viz., the dorse (*Gadus callarias*), the coal-fish (*Gadus carbonarius*), and the pollack (*Gadus pollachius*), but chiefly from the first.

In general, continental writers distinguish three varieties of cod-liver oil, one white or pale yellow, a second brownish-yellow, a third dark brown. But between the finest pale yellow or almost colourless oil, and the dark brown cod-oil used by curriers, there is an almost infinite variety of shades, so that no absolute difference can be founded on colour only.

De Jongh found the principal constituents of these oils to be *oleate* and *margarate of glycerine*, possessing the usual properties. But they also contained *butyric* and *acetic acids*, *the principal constituents of the bile* (bilifellinic acid, bilifulvin, and cholic acid), *some peculiar principles* (among which was the substance called *gaduin*) and not quite one per cent. of

salts, containing iodine, chlorine, and traces of bromine. Moreover, he found that the oils always contained free *phosphorus*.

From De Jongh's analyses, it would appear that the *pale* oil is richest in oleic acid and glycerine—that the *brown* oil contains the largest amount of margaric, butyric, and acetic acids, and of the substances peculiar to cod-liver oil—and, lastly, that the *pale brown* oil is richest in iodine and saline matters.

Considerable importance has been given to the fact that cod-liver oil frequently or usually contains both *iodine* and *bromine*. To the presence of one or both of these substances has been ascribed the whole or part of the remedial efficacy of the oil. A little consideration, however, would be sufficient to prove that their therapeutical agency in the oil must, if any, be exceedingly small. The proportions in which they exist in the oil is inconstant, though in all cases very small. Moreover, beneficial effects have been produced by the use of the oil, which neither iodine or bromine are capable of producing.

The largest amount of iodine found in genuine oil is less than 0·05 per cent. If the amount obtained be larger than this, fraud may be suspected. It is said by Dr Martiny that some dishonest druggists have introduced iodine into the oil for the purpose of augmenting its commercial value. Nay, it is stated that an artificial cod-liver oil has been made by combining iodine with common fish or train oils.

The proportion of *bromine* was estimated in conjunction with that of chlorine, as the quantity was too small to admit of accurate separation. Together, their amount in the pale oil was 0.14 per cent.

In the same analysis the proportion of *phosphoric acid* was 0·09, and of *phosphorus* 0·02 per cent.

The characters by which we judge of the genuineness, purity, and goodness of the oil are partly physical, partly chemical.

The physical characters are colour, odour, and flavour. The finest oil is that which is most devoid of colour, odour, and flavour. The oil as contained in the cells of the fresh liver is nearly colourless, and the brownish colour possessed by the ordinary cod-oil used by curriers is due to colouring matters derived from the decomposing hepatic tissues and fluids, or from the action of air on the oil. Chemical analysis lends no support to the opinion, at one time entertained, that the brown oil was superior, as a therapeutical agent, to the pale oil. Chemistry has not discovered any substances in the brown oil which could confer on it superior activity as a medicine. On the other hand, the disgusting odour and flavour, and nauseating qualities of the brown oil, preclude its repeated use. Moreover, there is reason to suspect that, if patients could conquer their aversion to it, its free use, like that of other rancid and empyreumatic fats, would disturb the digestive functions, and be attended with injurious effects.

Of the chemical characters which have been used to determine the genuineness of cod-liver oil, some have reference to the iodine, others to the gaduin or to the bile constituents. It was already stated that some fraudulent persons are said to have admixed iodine (either free iodine of iodide of potassium) with train oil to imitate cod-liver oil. The presence of this substance, when mixed artificially, may be readily detected by adding a solution of starch and a few drops of sulphuric acid, by which the blue iodide of starch is produced; or the suspected oil may be shaken with alcohol, which abstracts the iodine.

Sulphuric acid has been employed as a test for cod-liver oil. If a drop of concentrated sulphuric acid be added to fresh cod-liver oil, the latter assumes a fine violet colour, which soon passes into yellowish or brownish-red. Some samples of oil produce at once the red colour, without the preliminary violent tint. It has been erroneously supposed by some persons that this violet colour was due to the evolution of iodine by the action of the acid on an alkaline iodide contained in the oil. If that were the case, the presence of a little starch-paste would be sufficient to convert the violet into an intense blue colour; which is not the case. The colouration in fact depends on the action of the sulphuric acid on some one or more organic constituents of the oil, and the following facts lead Dr P. to infer that it is in part due to the presence in the oil of one of the constituents of the bile. Dr Pereira then enumerates several facts, in favour of this view. He concludes:—

"It follows, therefore, from what has been stated, that oil of vitriol is a test for liver oils. It does not distinguish one liver oil from another, for it re-acts equally with the oil of the liver of the ray and with the oil of the liver of the common cod. Neither does it distinguish good cod-liver oil from bad, for it produces its characteristic re-action both with common brown cod-oil, and with the finest and palest qualities. But it serves to distinguish oil procured from the liver, from oil obtained from

other parts of the animal."—*Ph. Journ.*, Feb. 1849.

130.—*Sulphate of Amorphous Quinine.* By Mr Bullock, Chemist, London.—As a therapeutic agent, Mr Bullock considers this preparation in every respect equal, and for some purposes superior, to the crystalline variety of quinine. It is now some years since Mr B. first recommended it to the profession, during which period its value as a substitute for the ordinary sulphate, has been most extensively tested in all those diseases in which quinine is employed. As a periodic in intermittent fever and neuralgia, it appears to be equally energetic with the crystalline preparation, and as a stomachic and general tonic, many bear testimony to its greater efficiency, from the ease with which it is borne by the stomach. The headach and other unpleasant effects, which frequently result from the exhibition of quinine, are rarely occasioned by the amorphous salt.

The salts of amorphous quinine being deliquescent, the sulphate is sold in solution, five minims of which contain a grain of the salt. This is very convenient in prescribing. Mr B. recommends those who desire to employ it in combination with a vegetable acid, to order the acetate which is prepared in the same manner as the sulphate. The following are the proportions of the different acids required for the preparation of the salts of amorphous quinine.

One grain of amorphous quinine requires
4 minims dilute sulphuric acid.
3 ... hydrochloric acid.
5 ... nitric acid
3 ... phosphoric acid.
7 ... acetic acid.

2 grains citric acid
2 „ tartaric acid
} Mix with the amorphous quinine then add a few drops of water.

Rub the amorphous quinine with the acid in a mortar until it is dissolved.

The price of the sulphate of amorphous quinine, which is less than one-half that of the crystalline variety, strongly recommends it to the physicians of hospitals, dispensaries, and other charitable establishments, as well as to country practitioners, who will find it a considerable economy.

[From extensive trials we are satisfied that the solution of the sulphate of amorphous quinine, represents all the most important physiological and therapeutic properties of cinchona bark. We found it eminently useful in improving digestion and in restoring the normal tone to the stomach of convalescents from cholera. In diseases of debility generally, it is an excellent tonic. Equally active with the crystalline sulphate, it is certainly less apt to disorder the stomach in full doses. M. Winckler's observations on amorphous quinine and cinchonine were noticed in our Retrospect for 1848. P. 151.]

131.—*Physiological Action of Nitrate of Potassa.* By F. Löffler.—The following account of the action of nitre is derived from a series of experiments made by five students on their own persons, while in health. The salt was taken in solution, with the addition of a little mucilage, in quantities increasing gradually from one to five drachms daily. The proportion for each day was divided into five separate doses. Each student took in this manner, during the course of one experiment, from three to five ounces.

After from eight to twelve days' use of the medicine, the blood drawn from the veins presented the following characters:—1. In colour and density it resembled cherry juice. 2. The number and size of the colourless blood corpuscles were increased. 3. The blood globules were paler in colour. 4. The blood coagulated very quickly. (The average time required for the coagulation of blood taken from the five subjects of experiment, previous to the employment of the nitre, was ten minutes—after its use, only five minutes and three-quarters.) 5. Increased proportion of water, and corresponding diminution of the solid constituents of the blood. 6. Diminution of its fat. 7. Increased proportion of ash in serum. 8. Diminished firmness and elasticity of the crassamentum, the solid constituents of which were less in quantity than in normal blood.

The symptoms observed from the use of the nitre were general weakness, and indisposition to exertion of body or mind, increasing in intensity with the continued employment of the drug; low spirits; fatigue from the slightest exertion; the muscles and joints felt as if they had been bruised, and the knees were especially weak; constant disposition to sleep; slow and weak pulse. This last symptom began to show itself on the second or third day, and gradually became more marked; so that towards the end of the experiment the frequency of the pulse was several times reduced to twenty beats in the minute. The pulse did not recover its normal strength and frequency for seven or eight days after the discontinuance of the medicine. Towards the end of the experiment, the face became distinctly paler and thinner. The appetite

continued good, and the digestion was not disordered. The action of the bowels was for the most part healthy, at other times the drug occasioned some pain of the belly, followed by purging. On account of the great heat which prevailed while the experiments were made, no certain deductions can be drawn in reference to its action upon the kidneys. The quantity of urine, on several occasions, exceeded by as much again the amount of fluid drank, and generally there was more or less diuresis.

The author promises to repeat his experiments when the temperature is more suitable, to ascertain precisely the changes induced in the composition and quantity of the urine.—*Schmidt's Jahrb.*, 1848.

[At p. 71 of last month's *Retrospect* we noticed M. Cardan's interesting case, where three ounces of nitre, administered accidentally to a man, occasioned severe intestinal irritation and marked diabetes. In the *Union Méd.*, of March 3, M. Vanoye reports another case, where one and a half ounces of the nitrate of potassa were given, by mistake, to a young female, ill of typhus fever. For an hour she experienced considerable uneasiness and inclination to vomit. Her face became remarkably pale, contrasting strongly with its previous febrile flush. Repeated vomitings, alternated with fainting, soon succeeded. The vomited matter contained bile, and a large quantity of blood. She complained of acute pains in the epigastrium. From being strong and full, the pulse was now small and irregular, and fears were entertained for the patient's life. She recovered. The treatment consisted in cold emollient drinks, a little laudanum, and sinapisms. She had no desire to urinate until about four hours after taking the nitre, when she passed some clear, high-coloured urine, which gave no deposit on cooling. Afterwards the quantity of urine was not greater than the normal. It is worthy of remark that, on the day following, the patient was convalescent from the typhus fever. This fact is the more surprising as, of three members of the same family who had typhus at the same time, one died, and the other two were long and seriously ill.

Compared with M. Cardan's case, M. Vanoye's is peculiar in the entire absence of diuresis, which can be accounted for only by supposing that the salt was rejected by vomiting. The action being purely local on the gastro-intestinal mucous membrane, absorption was prevented, and hence the secondary effects could not be manifested.]

132.—*Powder of Cinchona Bark in Typhoid Fever.* By M. VESIGNIE.—The treatment recommended by M. Vésignié is applicable only to the second stage of typhoid fever, and its object is, to apply directly to the ulcerated surface of the intestines an agent which will promote cicatrization of the ulcers, and at the same time exert an antiseptic action on the contents of the bowel. The drug best adapted to accomplish this end is, according to the author, the powder of red bark, which traverses the entire canal, and reveals its presence in the fæces, by the colour which it imparts to them. He considers the beneficial action of cinchona powder, when applied to gangrenous sores on the external surface of the body, an established fact. To avoid irritation of the stomach, he administers the bark in small and frequently-repeated doses—(8 grs. every two hours). The author suggests, but has not himself tried, the addition of one-tenth part of camphor. *L'Union Méd.*, Jan. 9, 1849.

[M. Vésignié's experience of this mode of treatment has not been sufficiently extensive to satisfy us of its utility. The administration of cinchona bark in severe fevers is no novelty; but, although the practice is old, M. Vésignié's theory of the action of the drug is new. Formerly its general tonic power was desired, and with this view it was given frequently in decoction and infusion, the more readily to secure absorption. In therapeutics it is a good general rule always to apply drugs directly to the diseased part, where that is possible—as the local agency of medicines is greatly more certain and effective than their general or remote action. We have, therefore, always approved of attempts to act locally upon the intestinal lesions of typhoid fever; but we fear that the agents (nitrate of silver, chlorides, &c.) hitherto exhibited by the mouth with this intention, rarely arrived at their destination, and it is scarcely possible to reach the ulcers by injection into the rectum. The proposal of M. Vésignié is worthy of a trial.]

133.—*Cauterization with Sulphuric Acid in Articular Rheumatism.* By M. LEGROUX.—The author relates several cases of articular rheumatism where the joints continued obstinately painful after all fever had subsided, notwithstanding the frequent application of blisters and other

local remedies. Ultimately cauterization with sulphuric acid, repeated three or four times, effected a cure. The acid is lightly painted over the more painful spots of the joint with a hair-brush, or piece of lint. A superficial brown eschar is formed, which leaves no cicatrix.—*Bull. de Thér.*, Jan. 1849.

134.—*Experiments on Senna and Argol Leaves.* By HEBERLEIN.—According to Heberlein, spirit of wine extracts from senna-leaves only chlorophylle and extractive matter, the *cathartine* of Lassaigne and Feneulle, which does not, however, possess in the slightest degree the purgative effect ascribed to it by these gentlemen; for after repeated experiments with smaller quantities, the alcoholic extract of one and a half ounces of senna leaves were taken without any effect. The uselessness of treating senna-leaves with spirit of wine, and the inefficacy of tinctura sennæ are therefore obvious. The aqueous extract of four drachms of senna leaves, which had first been exhausted by spirit of wine, effected evacuations with griping; so that the griping principle had not been removed by the spirit. The leaves used for these experiments were those of Tripoli senna, which are quite free from the leaves of *Cynanchum Argheul*. The latter, which are found among the Alexandrian senna, are in bad favour among physicians, but without just grounds, for experiments made with the picked leaves of *Cynanchum Arghuel* showed them to be harmless. An infusion of two and a half drachms produced no effect or inconvenience.—*Pharmaceutisches Central-Blatt*, No. 54.

135.—*Hydrochloric Solution of Arsenious Acid; De Valangin's Solutio Solventis Mineralis.* By Dr PEREIRA.—Arsenious acid, gr. xxx.; hydrochloric acid, gr. xc.; distilled water, fℨxx. Dissolve the arsenious acid in the hydrochloric acid diluted with about fℨj. of water; then add the remainder of the water to the solution.

By dissolving arsenious acid in hydrochloric acid, we obtain a solution either of the *terhydrochlorate of arsenious acid*, or of the *terchloride of arsenic*. $As\,O_3 + 3\,HCl = As\,Cl_3 + 3\,HO$.

For the preceding formula for the preparation of De Valangin's solution, Dr Pereira is indebted to Mr Warington, who tells him that it is the one which is intended to be introduced into the forthcoming new edition of the *London Pharmacopœia*. De Valangin's solution is considered by some practitioners to be superior to any other preparation of arsenic.

Dr Pereira has on numerous occasions employed De Valangin's solution, and he is not satisfied of its superiority to the solution of arsenite of potash, which cures or greatly relieves a very large portion of the cases of chorea and lepra which usually present themselves. It is supposed to be less apt to disturb the stomach on account of its not suffering decomposition and separation of the arsenious acid, as does arsenite of potash, by the acid gastric secretion. Before its absorption, however, its acidity must be neutralized by the bases (soda of the bile principally) which it meets with in the alimentary canal. It is probable, therefore, that the arsenic of De Valangin's solution passes into the blood as arsenite of soda.

One fluid ounce of the solution, prepared according to the formula above given, contains only one grain and a half of arsenious acid; whereas the same quantity of Fowler's solution contains four grains of arsenic. It is probable, therefore, that the real explanation of the infrequent occurrence of gastric symptoms under the use of De Valangin's solution is referable to the smaller quantity of arsenic administered.—The dose is from ℿij. to ℿx. thrice daily.—*Materia Medica*, p. 669.

VI.—FORENSIC MEDICINE AND TOXICOLOGY.

136.—*The Poisons of the Animal Kingdom.*—The poisons of the animal kingdom have not usually been considered under a general point of view. These poisons fall into two groups; and this division closely corresponds with the differences in their mode of operation, and in the therapeutic indications. Those of the one group exist ready formed in certain animals; and, as these belong to a state of perfect health, they should be termed normal animal poisons. Those of the second group are accidental, being produced in a state of disease; these are the anormal or pathological animal poisons. The first belong to the family of sedative agents (hyposthénisants, or apyretiques); the second are excitants (hypersthénisants).

The normal organic poisons of the animal kingdom occur only in the lower parts of the

zoological scale, and particularly among the cold-blooded tribes. They fall chiefly under three heads,—reptile-poisons, fish-poisons, and insect-poisons. To the last head belong the poisons of cantharides, of bees, of wasps, of hornets, &c. Some natural products of quadrupeds, such as musk and castor, might come under this head, were these to be considered as poisons. There are also some altered animal substances accidentally rendered poisonous, which do not, like the last, coexist with life; of this latter description are lard, puddings, sausages, cheese, &c. These substances should be ranked with the first group, on account of their sedative action (à cause de leur action hyposthénisante). All the poisons of this first group require a stimulant treatment, as has been shown by many memoirs, rich in facts, scattered through the five first volumes of this journal (*Annales de Thérapeutique*). The anormal or pathological poisons are of a very different character. The morbid poisons, as that of rabies, glanders, malignant pustule, variola, vaccinia, syphilis, belong to this head. Besides their specific character, which renders them inoculable, these poisons produce in the animal economy inflammatory and febrile phenomena, requiring in general a reducing treatment, based on remedies of special action (une medication hyposthénisante et speciale, savoir basée sur des remedes à action élective). The majority of epidemics and of eruptive diseases fall under this head.—*Annales de Thér.*, Dec. 1848, and Jan. 1849. P. 361.

137.—*Poisoning by Mushrooms.*—Cases of poisoning by mushrooms have increased in Italy of late to a frightful extent. Very recently an accident of this kind at Pisa was reported, which proved fatal to seven persons. The Journal of the Medico-Chirurgical Academy of Turin, which has just come to hand, recounts three other like accidents; one in Piedmont, and two at Rome. In that of Piedmont, the family of a peasant at Lombrioseo suffered, the whole family consisting of seven persons having perished. In one of the cases at Rome, the mushrooms were gathered by a joiner near the Pontine Gate; in the other, by a dyer near the Popolo Gate. Both carried the mushrooms to their families, and five persons in all were destroyed, namely, the joiner, his wife, and his daughter, a girl of ten years of age; the wife of the dyer, and his daughter, twelve years old. All these deaths took place within forty-eight hours.—*Annales de Thér.*, Dec. 1848, and Jan. 1849. P. 361.

138.—*Case of attempted Poisoning by the introduction of Sulphuric Acid into the Rectum.*—M. PINJON of Saint Etienne, has given in the *Jour. de Méd., de Lyon*, a detailed account of the history of a case in which a wife attempted to destroy her husband, first by poisoned wine, and then by the use of enemata, containing sulphuric acid. The symptoms, as might be anticipated, were those of extreme irritation of the bowels within, and of the external parts adjacent to the anus. The case was treated without any suspicion of the cause of the patient's sufferings—nor was the real nature of the case discovered till three months had expired. About the fourteenth day from the commencement of the symptoms, a portion of intestine was passed by stool—after which the amendment, though very slow, was gradual, and a complete recovery took place. The event occurred in the end of 1844, and four years after the man (Maisonneuve), was examined by M. Pinjon, and found to enjoy good health, though with some peculiarities in the action of the bowels. The account before us does not enter into any detail of the evidence on which the charge of poisoning is founded, reference being made only to the effect produced on the straw of the chair on which he sat when the first enema was administered, and on the curtain of the bed on which he lay where the second was used.

Two cases besides are referred to in which sulphuric acid was thrown into the rectum, and yet recovery for the time took place, one detailed by M. Fouquier, in the *Gazette des Hopiteaux*, 1846, p. 575, the other in the *Annales de Thérapeutique*. Vol ii. p. 457.—*Annales de Thér.*, Dec. 1848, Jan. 1849. P. 359.

139.—*Poisoned Confectionary.*—DR WALTER FERGUS has published the case of three children who were attacked with symptoms of poisoning in consequence of having eaten portions of the green sugared ornament of a cake. The symptoms were of considerable severity for some time, but all recovered. From the residue of the ornament arsenic was distinctly obtained. Dr Fergus ascribes the recovery of his patients in part to the immediate use of the hydrated peroxide of iron. As this agent is believed to exert a chemical effect on the arsenite of copper, the form of arsenic supposed to be present in such ornaments, a difficulty arises as to the soundness of this conclusion.—*Lond. Med. Gaz.*, Feb. 16, 1849, p. 304.

140.—*Effects of the Use of Arsenic in Agriculture.—Poisoned Game.* By Dr

FULLER.—Dr Fuller of St George's Hospital has recently called attention to the probable injurious effects resulting from the use of arsenic in steeping seed-corn.

"For some months past," says Dr Fuller, "in certain parts of Hampshire partridges have been found dead in the fields, presenting a very remarkable appearance. Instead of lying prostrate on their side, as is usually the case with dead birds, they have been found sitting with their heads erect and their eyes open, presenting all the semblance of life. This peculiarity, which for some time had attracted considerable attention among sportsmen in the neighbourhood, led to no practical result until about ten days ago, when a covey of ten birds having been found nestled together in this condition, two of the birds, together with the seeds taken from the crops of the remaining eight, were sent up to London for examination. I was requested to undertake the investigation, and the result of my experiments I will now briefly detail.

"I first examined the seeds taken from the crops of the birds, and detected, as I anticipated, a large quantity of arsenic. I then proceeded to ascertain whether the flesh of birds so poisoned might not itself prove poisonous when eaten, and with this view I carefully cut the flesh off the breast and legs of one of the birds, and gave it, together with the liver, to a fine healthy cat. She ate it with avidity, but in about half an hour she began to vomit, and vomited almost incessantly for nearly twelve hours, during the whole of which time she evidently suffered excessive pain. After this nothing would induce her to eat any more partridge. I kept her without food for twenty-four hours, but in vain; she resolutely refused to touch an atom more of the bird. This being the case, I gave her some beef and some milk, which she eagerly swallowed—proving, beyond doubt, that her instinct, and not her want of appetite, induced her to forego the dainty meal which had just been offered her.

"I cut the flesh off one side of the breast of the other partridge, and after about an hour's boiling obtained, by Reinsch's process, a thin incrustation of metallic arsenic—thus demonstrating, beyond question, what the previous experiments had left little room for doubting.

"It is notorious that many of the dealers in game are supplied through the agency of poachers and others, who have a direct pecuniary interest in supplying them with the largest possible number of birds. It is certain, moreover, that if men of this sort were to find a covey of partridges in a field, dead, but fresh and in good condition, they would not hesitate to send them with the remainder of their booty to the poulterer, who would as certainly, without suspicion, sell them to his customers. And, after the experiments above detailed, there can be no reasonable grounds for doubting that these birds, when eaten, would produce disagreeable and injurious, not to say poisonous, effects on those who partake of them. It is obvious, therefore, that in all cases of supposed cholera, or of suspicious bellyache, occurring at this season of the year, we shall do well to make particular inquiry as to whether our patient has recently partaken of pheasants or partridges purchased at a poulterer's; and it is further manifest that in all cases of poisoning, or suspected poisoning by arsenic, the fact of the persons having lately eaten of partridges and pheasants must form an important element in the inquiry, and must tend to cast a suspicion on the evidence adduced to prove a criminal intent in the administration of the poison. So that in a medico-legal point of view the question is one of the gravest import."—*Lancet.*

[The subject to which Dr Fuller has very properly called attention has been pretty fully discussed by Mr Taylor, in his recently published work on poisons. Mr Taylor had found arsenic in the flesh of game which had been poisoned by steeped corn, and arrived at the same conclusions as Dr Fuller. The subject has also been investigated in France, where a commission was appointed by the Academy of Sciences to prosecute an inquiry as to whether the flesh of sheep suffering from the effects of arsenic was poisonous. It was ascertained that the flesh of poisoned animals is noxious; but, if they live sufficiently long, the whole of the arsenic is voided in the urine and fæces, and the flesh may then be eaten with impunity.]—*Ph. Journ.*, Jan. 1849.

141.—*Poisoning by the Berries of the Yew.*—There are very few cases recorded of poisoning by the berries of the Taxus baccata; indeed, many persons disbelieve in its poisonous nature altogether. Gray, in his treatise on Pharmacology, says, "the berries have been thought to be poisonous, but they may be eaten." I believe they are not mentioned by Dr Christison in his valuable work on poisons. Drs Copland, Guy, and Taylor, in their respective works, bear testi-

mony to the extremely poisonous nature of the Taxus baccata.

Sunday, Oct. 28, 1838. Mary Baker, a fine healthy child, between five and six years of age, ate freely of yew-berries just before going into church. About an hour after, during divine service, she fell from her seat, and was instantly removed, in an insensible state, to her home. I saw her immediately; the surface of the body was cold; the countenance pale; breathing laborious and frequent; pupils very dilated; pulse feeble; convulsions, and vomiting. Having carefully examined the head, and finding it was not injured by the fall, I gave an emetic, and from what was ejected, it was evident she had eaten a considerable quantity of the berries; not the mucous part only, but the seeds, wherein I believe is the most active principle of the berry, for the mucous or fleshy part of the berry has been frequently eaten with impunity. As soon as it appeared the stomach had been freed of its contents, a purgative was given, and had the desired effect, but the child never rallied from the first. She continued in a comatose state, and died in *four hours* after eating the berries. An inquest was held, but no post-mortem examination allowed. I stated, in my evidence, I considered yew-berries poisonous, and that the child's death had been occasioned by them, but I remember several of the jury were very sceptical on the point.—*Dr Taylor in Prov. Journal.*

142.—*Process for the more certain Detection of Arsenic.* By Dr Geoghegan. —The author proposes the following procedure, by which a given quantity of arsenic may be transferred undiminished to each of the fluid tests in succession. As minute precautions in manipulation vitally affect the result, he premises that want of success in the application of the fluid tests to small sublimates, sometimes arises from not reducing the latter to powder before attempting their solution. The sublimate being carefully detached by a glass rod, aided by a fine stream of distilled water, should be received in a small porcelain mortar, and carefully triturated. The solution having been effected by boiling, should (1) be precipitated when cool by ammonio-nitrate of silver. The yellow arsenite obtained is to be next decomposed by a slight excess of pure hydrochloric acid, and the filtered solution treated (2) by a current of sulphuretted hydrogen. Having ascertained the solubility of the resulting sulphuret in ammonia, it should now be dissolved in nitro-muriatic acid, and evaporated to dryness (avoiding excess of heat at the close), re-dissolved and precipitated (3) by nitrate (or ammonio-nitrate) of silver, which yields the brick-red arseniate (4.) Finally, the latter being decomposed by hydrochloric acid, in minimum quantity, the filtrate should be heated with a few drops of an aqueous solution of sulphurous acid, the excess of the latter expelled, and hydrated oxide of copper, with ammonia, in minute quantity, added. We can thus elicit the reactions of the *four* fluid tests from a quantity of arsenious acid which would prove refractory by the common method of subdivision, and are hence enabled to ensure a satisfactory issue in difficult cases. The final step of the operation is not always successful, the ammonio-sulphate of copper being, even in experiments on larger quantities, a much less delicate test than those previously named. Having obtained, however, the antecedent results, the evidence of the presence of arsenic may be deemed complete. Modifications of the foregoing method will at once suggest themselves, and may be adopted at pleasure. It may occur to the instructed reader, that the success of the copper test might be secured by re-precipitation and sublimation of the arsenic subsequent to the formation of arsenite of silver; as, however, there is reason to believe that no inconsiderable portion of the metal is often retained by the copper foil as an arseniuret, this procedure is not to be recommended.—*Med. Gaz.*, Oct 6, 1848.

LONDON: JOHN CHURCHILL, PRINCES STREET, SOHO.
EDINBURGH: SUTHERLAND AND KNOX, 23, GEORGE STREET.
FANNIN AND CO., DUBLIN; J. B. BAILLIERE, PARIS;
AND ALL BOOKSELLERS.

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

MAY, 1849.

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I.—PRACTICE OF MEDICINE.

143.—*On the Symptoms of Disease of the Pancreas.* By PROFESSOR SIEBERT of Jena.—The author enters into an analysis of the symptoms in fifteen cases, which were concluded to be examples of pancreatic disease *by the method of exclusion.* These cases presented in common the following characters:—1. Pain in the epigastrium deeply situated and increased on pressure, and in the exacerbations radiating towards the back and thorax. 2. Pain, oppression, and burning eructations or vomitings of watery matter at the time of the duodenal digestion, *i. e.*, a few hours after taking food, accompanied either by constipation or diarrhœa, but with little alteration of the primary digestion, or of the state of the tongue and appetite. 3. Emaciation, followed sooner or later by anæmia, while the quantity of nutritious food consumed was considerable. 4. Pulsation in the epigastrium, often visible, increased by pressure, and occasionally accompanied by an arterial bruit, communicated to the stethoscope. This sign, when others harmonise with it, is supposed by the author to be pathognomonic of disease of the pancreas.

Professor Siebert has never found sugar in the urine of persons labouring under the above symptoms, nor has he generally found these symptoms to be present in diabetic patients. His views, therefore, afford no support to Bouchardat's theory which ascribed the diabetic condition to disease of the pancreas. (See the review on Diabetes—*Monthly Journal*, September 1848).—*Haeser's Archiv. für die Gesammte Medizin.*, and *Œst. Medizin. Wochenschrift*, April 22, 1848.

[We need scarcely point out that the *method of exclusion* is a very slender protection against error in so bold an assumption as that of Professor Siebert. With-

out, however, adopting his speculative diagnosis too hastily, we think the above group of symptoms worthy of attention. Individually, they have long been known as characterising that protean disorder, dyspepsia; and it is not at all improbable that they may be more or less closely connected with the derangements of an organ which every day teaches us more and more to regard as of the greatest consequence to the assimilative functions. The epigastric pulsation, to which such importance is attached in the paper before us, is a not unfrequent symptom of deranged digestion; but it certainly occurs, as we can attest from repeated observation, entirely apart from the other symptoms mentioned by the author, and apparently without any other organic cause. Dr Parry, it is well known, ascribed it to the pressure on the aorta of fæces in the transverse colon; and various other theories of its production have since been given to the world. That of the author seems, on the whole, to have a good deal in its favour. "When we think," says he, "that the pancreas is supplied by numerous and large arteries springing from the aorta on which its head rests, and that it is furnished with nerves from the same plexus which surrounds the aorta, we may consider the pulsation in question as bearing the same relation to irritation of the pancreas, as the pulsation of the regions over an inflamed paratōd, or a vascular struma (inflamed goitre)."]

144.—*Anæmia—Disease of the Suprarenal Capsules.* By Dr ADDISON.—Dr Addison described a remarkable form of anæmia, which, although incidentally noticed by various writers, had not attracted, as he thought, by any means, the attention it really deserved. It was a state of general anæmia incident to adult males, and had for several years past been with him a subject of earnest inquiry and of deep interest. It usually occurs between the ages of twenty and sixty; sometimes proceeding to an extreme degree in a few weeks, but more frequently commencing insidiously, and proceeding very slowly, so as to occupy a period of several weeks, or even months, before any serious alarm is taken either by the patient or by the patient's friends. Its approach is first indicated by a certain amount of langour and restlessness, to which presently succeed a manifest paleness of the countenance, loss of muscular strength, general relaxation or feebleness of the whole frame, and indisposition to, or incapacity for, bodily or mental exertion. These symptoms go on increasing with greater or less rapidity: the face, lips, conjunctivæ, and external surface of the body, became more and more bloodless; the tongue appears pale and flabby; the heart's action gets exceedingly enfeebled, with a weak, soft, unusually large, but always strikingly compressible, pulse; the appetite may or may not be lost; the patient experiences a distressing and increasing sense of helplessness and faintness; the heart is excited, or rendered tumultuous in its action, the breathing painfully hurried by the slightest exertion, whilst the whole surface bears some resemblance to a bad wax figure: the patient is no longer able to rise from his bed; slight œdema perhaps shows itself about the ankles; the feeling of faintness and weakness becomes extreme, and he dies either from sheer exhaustion, or death is preceded by signs of passive effusion or cerebral oppression. With all this, the emaciation or wasting of the body, though sometimes considerable, is not unfrequently quite disproportionate to the failure of the powers of the circulation—relaxation and flabbiness, rather than wasting of the flesh, being one of the most remarkable features of the disorder.

Dr Addison next proceeded to give the details of several cases which had fallen under his own immediate observation. In only two of these did the patients recover: the one, a man below the middle period of life, who was looked upon as past all hope, and suspected to be suffering from some latent malignant disease, slowly but steadily recovered under the free use of brandy, but with the singular result of the hair of one side of his head turning permanently grey, whilst the other retained its original brown colour. The second case of recovery occurred in a gentleman above middle age: it was by no means far advanced, but was sufficiently well marked to excite alarm. He left his business, quitted London, and sought recreation in the country. After a time he returned, and appeared to have shaken off the disorder almost entirely. In three cases only was there an inspection of the body after death, and *in all of them was found a diseased condition of the suprarenal capsules.* In two of the cases no disease whatever could be detected in any other part of the body. Dr Addison inquired if it were possible for all this to be merely coincidental? It might be so, but he thought not, and making every allowance for the bias and prejudice inseparable from the hope or vanity of an original discovery, he confessed that he felt it very difficult to be persuaded that it was so. On the contrary, he could not help enter-

taining a very strong impression that these hitherto mysterious bodies—the suprarenal capsules—may be either directly or indirectly concerned in sanguification; and that a diseased condition of them, functional or structural, may interfere with the proper elaboration of the body generally, or of the red particles more especially. At all events, he considered that the time had arrived when he felt himself warranted in directing the attention of the profession to these curious facts. In thanking the society for the patient hearing with which they had favoured him, he ventured to bespeak their interest not only in regard to the anæmia he had described, but also in cases of purpura, and some of the more anæmiated forms of chlorosis in the female, which he could not but regard as being more or less allied to the morbid state to which he had directed their attention. Indeed, not only had he found the anæmia in question occasionally occurring in connection with purpura, but had observed in cases of the latter disorder certain local symptoms which pointed somewhat significantly to the seat of the suprarenal capsules; whilst the bloodless and waxy appearance of certain chlorotic females bore so close a resemblance to the anæmia described, that it was difficult not to suspect the existence of something common to both.—*Rep. of South Lon. Med. Soc., in Med. Gaz. March* 3, 1849.

145.—*Diagnosis and Treatment of Biliary Calculi.* By M. Martin-Solon.—A man was admitted into the wards of the Hotel Dieu at Paris, who had a year before admission been subject to attacks of violent spasmodic pain in the abdomen, accompanied occasionally by jaundice. These had afterwards become supplanted by fixed uneasiness in the epigastrium and right hypochondrium, with painful digestion, which symptoms continued on admission. The pain was always much increased by movements of the body. On pressing with some force over the region of the gall-bladder, which was slightly tumid, M. Martin-Solon discovered a dull crepitation, not unlike that which is found in the hepatic region when superficial hydatids are present, but quite limited in extent. Calculi had not at this time been found, nor had they been sought for in the stools. To the sign above mentioned, M. Solon attributed very considerable importance.

The prescription was a mixture of oil of turpentine and ether, in the proportion of two parts of the former to one of the latter. Of this mixture the patient took 15 grs. (℥ij by weight), on two successive days, after which, he passed by stool without any pain, five calculi, the surfaces of which were from a quarter to half an inch in diameter.

This method of treatment was proposed in the end of last century by Durande, a physician of Dijon, and after having for some time a great reputation, was again forgotten. M. Martin-Solon inclines to believe it efficacious, and ascribes the neglect into which it has fallen to its not having been pursued with the constancy which is usually necessary, the medicine being generally repugnant to the taste of the patient. In obstinate cases Durande continued the treatment for about fifty days, till the patient had taken 500 grammes (16 ozs.), of the mixture.—*Gaz. des Hôp.* March 10, 1849.

146.—*On Scapulalgia.* By M. Malgaigne.—This is an affection of the shoulder, resembling rheumatism in some respects, but differing from it in all essential particulars, and which, although not of very unfrequent occurrence, does not seem to have been noticed as a peculiar affection of this joint. In October last, a surveyor, aged seventeen, was suddenly seized in the country with a violent pain in the left shoulder; it continued with such intensity for forty-eight hours that the patient had not an instant of repose. The third day he was taken into an hospital in Paris when some relief was obtained by cupping; however, as there appeared no further progress made in the cure, he was advised to go to St. Louis, where he could get sulphur baths, as he was considered to have a rheumatic tendency. He was taken into that hospital on the 6th November, and presented the following symptoms:—The arm was close to the side, and the slightest attempt to move it produced the most intense suffering; the scapular region was but little swollen, and very little painful on pressure, except in one circumscribed spot, on which M. Malgaigne's attention was particularly fixed. On pressing with the finger upon the anterior part of the head of the humerus, the patient cried out with the pain in the part, and some accessory pains in its neighbourhood, particularly at the inferior angle of the deltoid muscle, but none in the elbow or other joints, which could give the idea of articular rheumatism. M. Malgaigne diagnosed a scapulalgia; that is to say, a pure and simple arthralgia of the shoulder, and for its treatment he fixed the arm immoveably with the bandage he employs in the treatment of fractured clavicle. The result was immediate. For the first time during seventeen days the patient slept.

From the 7th to the 17th, the relief continued uninterrupted; on the latter day the apparatus was removed, but moving the arm was found to be neither less painful nor difficult than at first. Although he passed tranquil nights, yet uninterrupted sleep was impossible, from his being obliged constantly to lie on the right shoulder; there was besides uneasiness of the biceps, and stiffness of the elbow of the affected side, from the long-continued immobility of the limb. M. Malgaigne was of opinion that liniments, vapour baths, sulphur baths, blisters, moxas, cauteries, &c., were worse than useless. On removing the bandages, he pressed on the painful spot at the anterior part of the head of the humerus (and which he considers indicates the acute or inflammatory stage of the affection), but it no longer gave pain on pressure, and he thence concluded that all the morbid phenomena still observed were exclusively owing to retraction of the ligamentous structures, and that the treatment by antiphlogistics was no longer necessary; he proceeded to extend the forearm, which required some exertion from its having been so long flexed. Gradually he ventured on giving the scapulo-humeral joint itself the motions of rotation and abduction without giving the patient any pain, and the patient was soon able to move it himself, and with so little pain or difficulty, that on the 18th he was able to take his cap off his head with his left hand, and in a few days more the cure might be said to be complete, except for some weakness that existed in the deltoid, which had been paralyzed from the commencement, but which M. Malgaigne does not consider an essential character of the disease, but only the result of long-continued inactivity, and which will disappear by use.

On the 28th of November, a few days after the preceding patient had been discharged, a jeweller, aged forty-five, was admitted. This woman never had rheumatism or neuralgia; three days before, while at work, she was suddenly seized with a severe pain in her right shoulder, followed by shiverings and nervous agitation during the whole night. An apothecary had given her a liniment and an anodyne draught, which gave her no relief. She remained without sleep, or the power to move her arm, for three days; the night of the day she was taken into hospital she also passed without sleep. On the 29th, M. Malgaigne saw her; there was the painful spot at the place of election, and slight pain all round the joint, but as usual without fever. The apparatus for fractured clavicle and a poultice were applied, but the former was badly fixed, and the patient did not sleep. On the 30th, the bandage was reapplied, and properly, and an excellent night's rest followed; on the 2d of December the pain had greatly diminished, and the patient had continued to rest well at night; on the 4th, there was pain on pressing over the anterior part of the head of the humerus. The bandage was now removed, and the forearm, which had been kept flexed, was extended. On the 5th, the motions of abduction and rotation were given to the limb; and by the 8th, she was herself able to use her arm perfectly, and was discharged. In this case there had been no paralysis of the deltoid muscle.—*Jour. de Méd.* and *Dub. Med. Press*, April 18.

147.—*On Asthma occurring in a Child.* By Dr TOTT.—A child, aged one and a half year, had been seized daily, at midday, for three months, with asthmatic paroxysms of difficulty of breathing, terminating in cough without expectoration. An intermittent fever prevailing in the vicinity, the author supposed that the disease might partake of its nature, and administered quinine with hyoscyamus, &c., as well as external derivatives; but without any avail. The *tinct. lobel. infl.* (fifteen drops every three hours) was then given in weak tea, and by the third day the paroxysms had become much diminished in intensity and duration, and in fourteen days no traces of the affection remained, the child continuing quite well when seen a year and a half afterwards.—*Neue Zeitschrift für Geburtskunde*, Band XXV. p. 197; *and Brit. and For. Med. Chir. Rev.*, April 1849.

148.—*On the Inflammation of the Umbilical Cord in Infants.* By M. MILDNER of Prague.—The separation of the remains of the cord after birth takes place either by a dry or moist gangrene. In both cases, a certain degree of inflammatory action accompanies the separation. In the first form, which is the most common in healthy and vigorous children, the inflammation is of limited extent and suppurative. In the latter there is left after separation of the dead portion, an ulcerated depression in which a conical projection shows the situation of the occluded vessels; and this ulceration may extend down to the peritoneum. In these cases, which almost always occur in the ill-nourished children of diseased mothers, and especially during epidemics of puerperal fever, inflammation of the umbilical vessels of the peritoneum, with purulent infection, are very

apt to occur. Purulent infection is denoted by the sudden accession of fever with pungent heat of skin, dry tongue, thirst, dyspnœa, tumultuous action of the heart, constipation, and general convulsions. The most certain sign, however, is the formation of metastatic abscesses, which, in infants, take place much more frequently in the skin and joints than in adults. The inflammation usually attacks several joints at once; it is in its consequences not dissimilar from simple inflammations, which, however, are rare in the joints of the infant, except as the consequence of injury, or strain during birth. Metastatic inflammations of internal organs differ little from those of the adult; lobular pneumonia (mostly with pleurisy), and purulent infiltration of the mediastinum with abscess of the thymus gland, are not uncommon. Hemorrhage from the umbilicus occasionally occurs in purulent infection. Convulsions occurred in 5 out of 48 cases of inflammation of the umbilical cord. In two cases they were due to universal purulent arachnitis, in one to an extravasation on the dura mater; in the others they were probably reflex. The convulsions were always general, but were strongly marked in the muscles of the face.—*Präger Vierteljahrschrift* Jahrgang V., Band II., and *Œster. Med. Wochenschrift*, 15th April 1848.

II.—PRACTICE OF SURGERY.

149.—*Ligature of the Left Subclavian Artery for Subclavian Aneurism; with a Remarkable Deviation of the Vessel and Consequent Change of its Relations.* By J. Mason Warren, M.D.—Dr Mason Warren relates the following case of ligature of the subclavian:—

Miss A., thirty years of age, of delicate constitution, had a congenital club-foot of the worst kind, and, in consequence, a double curvature of the spine. For the former of these she was treated eight or ten years since by Dr Brown at his infirmary, and the foot after the section of the tendons, followed by the appropriate treatment, was completely brought into its natural position, so that she was enabled to walk with ease, without the aid of any mechanical support. The curvature of the spine was submitted to a similar treatment with the same successful result.

At the request of Dr Brown, she consulted me in the early part of December 1847, for an aneurismal tumour situated just above the scapular end of the clavicle, about the size of a pigeon's egg, of which she gave the following history:—

Four months previous, while in attendance on a sick brother, she had occasion to draw the cork from a bottle, and felt at the moment a sudden crack at the point where the present tumour is situated. Her attention was not attracted to it at the moment, but a short time afterwards a small swelling, having a decided pulsation, was distinguished at that spot, which has gone on increasing until it has attained its present size. It had a powerful pulsation, and possessed the usual thrill characteristic of an aneurismal affection.

After having examined the tumour and learned its history, I endeavoured to discover the subclavian artery in its normal situation beneath the clavicle, at the point where it passes over the first rib. To my surprise no large vessel or any osseous protuberance answering to the tubercle of the first rib, usually taken as the guide to the artery in this position, could be found. Different parts of the neck were then explored, which finally led to the discovery of a large artery passing obliquely upwards, parallel to, and about an inch removed from, the external border of the trapezius muscle. Compression being made at this point, the pulsations of the tumour ceased, as well as the pulse at the wrist. There was no question, therefore, in my mind that this was the subclavian artery, but it was more difficult to determine this remarkable anomaly.

I now sought for the first rib, and to my surprise discovered both the first and a part of the second rib passing obliquely across the neck above the clavicle. The insertion of the scalenus anticus muscle into the first rib, was at length distinguished; the tubercle, however, was not sufficiently developed to be manifest to the touch. The whole osseous system of the chest in this case seemed to have undergone a partial displacement. The spine and ribs attached had been, as it were, moved upwards; while the sternum was carried in an opposite direction.

Making a strong compression on the vessel above the tumour, the arm became extremely painful, with a sensation of numbness, and on a subsequent and more careful examination the whole brachial plexus of nerves could be discriminated, in immediate contact with the artery.

As the tumour was rapidly increasing, it was evident that, considering its situa-

tion and the great danger of delay, no time was to be lost, if any surgical operation was to be resorted to for its relief.

The operation was performed on Dec. 24th, in the presence of Dr J. C. Warren, Dr Brown, Dr Buckminster Brown, Dr Bartlett of Roxbury, Dr Morland, and Dr Slade.

An incision, about two inches long, was made, extending from near the outer and upper edge of the sterno-mastoid muscle downwards, in the direction of the scapulo-clavicular articulation, and an inch from the edge of the trapezius muscle, the pulsations of the vessel being the principal guide, as the other anatomical marks were wanting. This incision divided the skin and superficial fascia; a second cut opened one of the branches of an artery given off from the thyroid axis, which was tied. A nervous band of some size was now encountered, and at its side, and directly over the artery, a large vein, apparently the external jugular. The vein was carried to the upper part of the wound with a silver hook, and the nerve to the lower; the dragging upon the latter caused a disagreeable and somewhat painful sensation in the arm.

The sheath of the vessel was next opened, the cellular membrane around it cleared away, and the aneurism needle, unarmed, passed from below upwards, on account of the difficulty of introducing it in the contrary direction from the interference of the scalenus anticus, which had its insertion just below. The needle at once encountered and raised the lower nerve of the brachial plexus, which was in the most intimate contact with the artery. By depressing the handle, and urging the point forwards, with careful manipulation the eye of the needle was without difficulty brought out between these two organs. The instrument was now threaded with the ligature and withdrawn. Careful exploration being made to ascertain if any nerve was included in the ligature, the painful sensations in the arm caused by drawing the ligature downwards at first led to the supposition that this might be the case. But when the same traction was made directly upwards, no pain was felt; the former sensations being produced by the dragging on the cervical portion of the brachial plexus, owing to their connection with the vessel.

The ligature was now tied, and the wound dressed. The pulsations in the aneurismal sac, as well as those of the radial artery at the wrist, at once ceased, and all appearance of the tumour vanished. The patient's arm and hand were a little cold directly after the operation, but being rolled in flannel they soon regained their natural temperature. The patient went on favourably, but the ligature did not separate till the 30th of March, 96 days after the operation. When Dr Warren saw her last, on the 14th September, she was quite well, and the tumour had almost entirely disappeared.—*American Journal of Med. Sciences*, January 1849.

150.—*Means of rendering the Ulnar Artery more accessible.* By M. MALGAIGNE.—The means suggested by M. Malgaigne, the efficacy of which the reader may at once test upon his own person, will be found of great utility, when circumstances prevent our feeling the pulse at the radial artery, or when it is desired to take up the ulnar. He thus describes it:—"I have several times had occasion to place a ligature around the ulnar artery for lesions of this vessel; and when the cellular tissue is gorged with effused blood, and it is necessary to seek it at a considerable depth, I do not hesitate to term it a very difficult operation. Perhaps the means I am about to state will assist in removing the principal difficulty, which especially depends upon the depth of the artery. If the fingers and hand are turned forcibly backwards upon the dorsal aspect of the forearm, the relations of the ulnar artery become surprisingly changed. The deep-seated muscles upon which it lies are forcibly raised, and cause a sensible projection under the skin. The tendon of the flexor carpi ulnaris, on the contrary, retreats inwards and backwards; so that the artery, which, in the natural position of parts is partly concealed by it, is now forced to a much more anterior plane, and lies four or five millimetres on the inner edge of the tendon. In many subjects it becomes more superficial than the radial, and it may be seen raising the skin at each pulsation.

"In traumatic lesions of the vessel, the same position brings the wounded extremity of the vessel towards the surface, and enables us to seize it; and in any case, when we wish to pass a ligature around the vessel, there will be no longer occasion to denude and draw away the tendon of the flexor."—*Revue Médico-Chirurgicale; as quoted in the Brit. and For. Medico-Chirurgical Rev.*, July 1848, p. 265.

151.—*High Operation of Lithotomy—Continuous Irrigations of the Bladder with Tepid Water.* By M. AMUSSAT.—M. Amussat, after performing the high operation in the usual manner, placed a large curved gum elastic tube into the bladder through the wound; this tube was retained

in the wound by means of several threads from each side, which were fixed with collodion to the integuments of the abdomen: he then introduced a small gum elastic catheter into the bladder through the large tube, this small catheter was connected externally with a very long tube, furnished with a stop-cock and receiver filled with tepid water. By means of this apparatus a continuous stream of tepid water was directed into the bladder, mixing with and diluting the urine, and which was received into a vessel placed between the thighs of the patient, the genital organs being protected by means of oiled silk. The Parisian editor remarks, "Thanks to these means (the irrigations) the urine caused not the slightest irritation, and the inflammation consequent on the operation was of the most moderate kind. There was no urinous smell about the bed or chamber of the patient, as used to be the case before M. Amussat employed this plan of irrigation."—*L'Union Méd.*, Dec. 28, 1848.

152.—*Slight Catarrhal Cystitis—Hæmaturia, Perforation of Bladder and Rectum—Recovery.* By Dr A. Berton.—Dr A. Berton relates the case of a merchant, a strong, healthy man, about forty-eight years of age, married, and leading an active, sober, and regular life, who applied to him, suffering from the usual symptoms of vesical catarrh, such as frequent desire to pass water, and the urine passed becoming thick on cooling. After a short time the deposit instead of being merely cloudy, became glairy, like the white of egg; but all this was unattended by any febrile symptoms, or other appreciable derangement of the general health.

At the end of a fortnight, and immediately after having had sexual intercourse, the urine became bloody, and continued in that state for a period of twenty days. At which time (although still without any sensible derangement of his health) he passed about two litres of fluid daily, composed nearly of equal parts of blood and urine; there was no excessive thirst, and the quantity of drink taken was nearly equivalent to the quantity of urine passed.

All kinds of hemostatics, blood-letting, counter-irritation, &c., failed to produce the slightest good effect during the whole of this time; shortly afterwards the urine, without ceasing to be bloody, became of a darker colour and more muddy, and at the same time began to exhale a marked sulphuro-ammoniacal smell. On exploring the bladder with a silver sound, and when introducing gum catheters for the purpose of injecting first astringents, and afterwards detersive and antiseptic lotions, air frequently escaped with noise; and subsequently the sulphuretted hydrogen odour, and the mixture of particles of feculent matter, left no doubt as to the existence of a communication between the bladder and the rectum. The patient was always rather constipated, and required the frequent use of lavements and gentle laxations; the principal remedial measures consisted of one application of the nitrate of silver upon the mucous membrane of the inferior fundus and posterior part of the bladder by means of an armed bougie, and the exhibition of the iodide of potassium and of the proto-ioduret of mercury internally.

The urine became gradually less bloody, but before completely losing its red colour and fetid smell, which it retained for nearly a fortnight, the patient found one morning in the night-stool two irregular fragments of a musculo-mucous tissue, about four or five millimetres in size, evidently the detritus of the bladder. Twenty days after all sensible traces of blood had disappeared from the urine, it only deposited a very slight cloud of mucus on cooling, and at the beginning of January, about two months from the time the patient consulted Dr Berton, the urine passed was perfectly limpid and in every respect natural, and the patient was quite cured.—*Gaz. des Hôp.*, Jan. 13, 1849.

153.—*Fracture of the Left Clavicle.* By M. Jobert (de Lamballe).—In May last a young man, rather above middle height, of robust constitution, came to the hospital of Saint Louis, complaining of not being able to use his left arm. His usual occupation was unloading vessels on the banks of the Seine; he stated that eight days previously whilst so engaged on board a vessel, having lost his footing, he fell suddenly forwards, and rather to the side; the shock was chiefly borne on the point of the left shoulder. He was, however, able to continue his work without much pain, and it was not till eight days after, on trying to raise a very heavy load to his right shoulder, that he felt a sudden severe pain at the top of the left shoulder, and his arm fell by his side. From this moment the limb was useless, or at least voluntary movement was reduced to a simple motion in the antero-posterior direction; all movements by another person caused excessive pain at the top of the shoulder. On examination, the clavicle was found fractured obliquely at the union of the external with the two internal thirds, the ordinary symptoms of this kind

of fracture were present. Ordered rest in bed, lying on his back, and the simple bandage to support the arm. He made a good recovery.

M. Jobert says, "this circumstance is remarkable in the annals of science. As far as we know, there are no examples in which the ordinary symptoms of fracture of the clavicle did not manifest themselves till eight days after a fall, the only cause to which the existing injury could be referred." What conclusion must be drawn from this observation? Was the fracture incomplete at first? Were the two fragments kept in relation by an uninjured portion of bone then displaced, and made to ride one on the other by the influence of muscular action which completed the separation during a violent effort? M. Jobert says, "I dare not take the responsibility of this explanation, although it appears to me the only one admissible under such circumstances. Perhaps subsequent facts may clear up what is in this case obscure, and give an explanation of a circumstance at least singular."—*Gaz. des Hôp.*, Dec. 19, 1848.

154.—*Case of Severe Laceration of Scalp, with Remarkable Reproduction of the Tissue.* By Mr FLEMING.—On the morning of the 8th day of June last, Jean Jones, aged fourteen years, a brusher in Henry Houldsworth and Sons' Spinning-Mill, Cheapside Street, Anderston, came under my care. The following were the circumstances of her case:—

While engaged in brushing beneath the inner end of a mule frame, in a kind of half-sleepy state, she had inadvertently allowed her hair to come in contact with a small revolving horizontal shaft, which, in pulling round the hair, carried along with it about *thirty five square inches* of the scalp, leaving the upper, front, back, and lateral parts of the skull, completely exposed to that extent, the thin transparent covering of the pericranium being all that was left. On reaching the mill, I found her in a weakly, half faintish state, sitting upon a chair, supported by her friends. She had lost but little blood, but the left temporal artery soon began to bleed so freely, as to require a ligature. The wound was dressed with the common adhesive plaster, covered with a cloth moistened with cold water, and the patient removed home to her bed, where she spent the first day and night in a much more comfortable state than could have been expected under the circumstances. On the second day, I found her in a remarkably comfortable state, compared to what I expected to find; and was not a little surprised at her informing me that, at the time of the accident she did not experience the slightest pain, nor was in the least aware of her misfortune, until she applied her hand to her head!

June 13.—Going on favourably; the whole surface of the wound studded over with healthy granulations, with the exception of a dark-coloured spot having a sloughy appearance, of about two inches in diameter in the centre of the wound.

June 17.—The whole of the dark spot sloughed off to-day, leaving about four square inches of the skull completely deprived of its pericranium—a superficial slough had separated from it on the 15th. Continued going on favourably, the wound diminishing in size very much; on the 27th it measured only *twenty-five* square inches. The denuded bone is dotted over with healthy granulations.

July 7.—Still going on favourably. Wound measures only *nineteen* square inches. On the 22d it measured only *twelve* square inches; the denuded bone is quite covered with healthy granulations.

July 30.—Wound diminished to *nine* square inches.

August 7.—The wound to-day measures only *seven* square inches, being only one-fifth of its original size two months since. The whole of the *new skin*, with the exception of about half an inch surrounding the wound, is as completely covered with *hair* as any other part of the *uninjured scalp*. The patient continues to be doing well, and is actually gaining flesh, and in a very few weeks will have completely recovered from the accident.—*Report of Inspectors of Factories*, p. 148.

155.—*Phymosis.* M. VIDAL.—For the cure of phymosis, M. Vidal prefers the operation of circumcision to that of making a simple incision through the prepuce, on account of the deformity and inconvenience to which the latter gives rise. He performs the operation in the following manner:—A line is marked with ink upon the skin of the prepuce in the direction in which the sutures are to be placed. The skin having been neither drawn forwards nor backwards, that part in front of the marked line is laid hold of, with a pair of broad pincers, and four threads are then passed through the prepuce with a fine needle. The part held by the instrument is then removed by means of a bistoury or strong scissors. The threads are now divided in the middle, and the eight sutures, thus obtained, are immediately tied so as to keep the cut edges of the skin and mucous membrane in accu-

rate contact. When the operation is performed in this manner, M. Vidal finds that there is seldom any hemorrhage, and the wound almost always unites by the first intention, so that the stitches may generally be removed after forty-eight hours.—*Gazette des Hôpitaux*, December 16, 1848.

156.—*Excision of the Head of the Femur.* By Mr H. Smith.—Mr Smith gives a detailed account of a case of spontaneous luxation of the femur, the result of disease of the hip-joint, in which he performed the operation of excision of the head of that bone, having, after careful examination and consultation with Mr Ferguson and several other surgeons, formed the opinion, that the disease was entirely confined to the femur. Little difficulty seems to have been encountered in the performance of the operation, owing to the superficial position of the bone upon the dorsum ilii. The case went on favourably for some time, but unsatisfactory symptoms afterwards appeared, the wound continued to discharge unhealthy matter; the patient gradually became more and more exhausted, and died about three months and a half after the operation. On examination after death, extensive disease was found to exist, both in the ilium and in the lumbar vertebræ.—*Lancet*, December 1848.

[This case affords an example of the extreme difficulty of determining to what extent the bones are affected in hip-disease; the absence of any symptoms indicating disease of the pelvis or vertebræ, having very naturally led to the conclusion, that the head of the femur was alone affected. We are only aware of three cases being on record, in which a similar operation has been performed with success; one by White in 1818; another by Professor Textor of Wurzburg in 1845; and the third by Ferguson in the same year.]

157.—*Case of Long Existing Curvature of the Spine.* By Samuel Hare, M.R.C.S.—The patient, a young woman, first came under the care of Mr Hare in the middle of October 1847, being then sixteen years of age. She had been a delicate child, and had suffered severely from the hooping-cough and measles; but it was not till her seventh year that it was observed she bent to the right side, and that the right shoulder was considerably enlarged. From that period the disease and the consequent debility had gone on increasing. The head was now fallen considerably forward and to the left side, and the chin approached very near the chest. The whole chest was very much contracted in front; the sternum being projecting, and the ribs excurvated on the right side. The dorsal portion of the spine was curved excessively to the right, and was likewise very much excurvated, so that the spine and the ribs formed a large projection backwards and upwards; this projecting mass was marked by two ridges nearly parallel to each other, the one being formed by the spinous processes of the vertebræ, and the other by the ribs of the right side which were bent upon themselves at an acute angle about an inch and a half from their spinal extremities. Three of the vertebræ (the second, third, and fourth dorsal), instead of being placed perpendicularly, formed an almost horizontal line; and the left hip projected exceedingly. She suffered from dyspnœa and palpitation, which had been becoming much worse for some years.

Thinking, from there being some mobility in the deformed part, that anchylosis had only partially taken place, Mr Hare determined on making an attempt to rectify the distortion. The patient was accordingly directed to keep the horizontal posture for several hours each day; frictions and firm pressure with the hand being occasionally employed. "Afterwards," says Mr Hare, "I applied firmer and more constant pressure, by means of a contrivance which I now generally employ, and which consists of a pad placed at the end of a spring, the power of which can be exactly regulated so as to suit any individual case, by raising or depressing at the side of the plain upon which the patient reclines, the upright piece to which the spring is fixed at a right angle. This is used at first for a short time, and afterwards for a longer period, as may be required, while the patient is in a prone position, and is applied in such a direction as gradually to press those portions of the spine which still retain their mobility towards their proper position. A constant but very gentle extension of the spine is likewise maintained during the time that the patient remains in the recumbent position, by the application of moderate weights to the head and extremities."

Under the above treatment the slight elasticity or mobility of the deformed part manifestly increased. This Mr Hare considers to be usually one of the earliest signs of amendment; and in this case, it was soon followed by an improvement in the appearance of the deformity. When

she had been nearly eleven months under this treatment, she was in the following improved condition. Her head was quite erect, and did not incline to the left side, and the neck was longer and well formed; the chest was more expanded, and its two lateral halves were nearly symmetrical, while the sternum did not project more than in an ordinarily formed chest. The spinal column was much more perpendicular than it had been; scarcely any thing of the lumbar curve remained, and the upper one was much improved. With this alteration in her figure, her health and strength had increased, and she was quite free from dyspnœa, being able to expire sixty-nine cubic inches of air in place of thirty, as was the case when she first came under treatment. — *London Medical Gazette*, October 1848.

158.—*Observations on a Rare kind of Aneurism of a Branch of the Femoral Artery.* By Mr CANTON.—The subject of these observations, a man about fifty-six years of age, on his admission into the hospital was of a cachectic appearance, and had a tumour situated on the upper part of the left thigh; it was of the size of a large walnut, hard, moveable, circumscribed, solid, indolent, and not pulsating. The tumour, he said, had come on within two or three days in consequence of a blow he had received, but in interrogating him more closely, it came out that he had struck himself against the corner of a desk five or six months previous. Three weeks after this examination, the tumour had reached the size of a hen's egg; it was situated on the inferior part of Scarpa's triangle, was always solid, and no bruit or pulsation heard in it. Doubting its nature, the author made a slight exploring puncture at a point which had seemed to be softening for some days previously; a very small quantity of serous fluid escaped, quickly followed by a jet of blood, in colour between arterial and venous. The mode of operating was thus indicated, and it was performed by dissecting carefully through the superimposed texture. When the tumour was laid bare, it was seen that it was united to the femoral artery by a very short branch; it was necessary to cut through the sartorius muscle to isolate completely, and then it was evident it was the muscular branch to that muscle that was the seat of the aneurism. A ligature was placed on a level with the origin of the branch from the femoral artery, and the tumour removed by scissors; it was found composed of concentrated fibrous laminæ, so arranged as completely to close up the orifice of communication with the femoral artery, thus accounting for the absence of all pulsation or abnormal sound in the tumour.—*Lancet*, March 1848.

159.—*Observations on Strangulated Congenital Hernia, with Internal Strangulation cured by Operation.* By Dr H. HANCOCK, Charing Cross.—There are numerous examples of portions of small intestine strangulated by a fold of the peritoneum, and the individuals labouring under it, perishing with all the symptoms of strangulated hernia without being able to perceive any swelling externally to indicate the nature of the disease. Along with these truly embarrassing cases, there are others which are no less embarrassing, for along with strangulated hernia, there may be present an internal strangulation, which, if not attended to, would cause fatal results. The following is a remarkable instance: A man fifty-seven years of age, had from birth been labouring under an inguinal hernia of the right side, which seemed to have caused very little annoyance, as he only commenced wearing a truss when twenty years old. On the 4th of September last, he was going to take a bath, and had consequently taken off his truss, and forgot to resume it. Immediately he felt pain at the position of the tumour, and all his efforts to reduce it, and also those of a surgeon who was sent for, proved unavailing. When Dr Hancock came, he found the patient very feeble, pulse slow and intermittent, the abdomen tense, the hernial tumour the size of a large orange, and very tense, and unable to bear the slightest touch. The integuments were already inflamed, and the operation was immediately performed. On opening the sac, a portion of intestine was seen very much inflamed, there was a tight constriction in the external ring, as also at the neck of the sac, both of which were freely divided; the reduction was then expected to have been easily performed, but it was impossible. As soon as the intestine was pressed within the abdomen, and the fingers withdrawn, it again came down; there existed some obstacle, some diverticulum of new formation preventing reduction. Accordingly, drawing down the intestine, and at the same time passing the finger into the abdomen, Dr H. found the intestine firmly constricted by a rounded band. The division of this band was rendered difficult by the intestine constantly moving in front of the instrument, but its division was effected, and immediately the intestine was reduced, and the symptoms relieved, and the cure completed.—*Lancet*, March 1848.

III.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

160.—*Of Prolapsus of the Funis during Labour.* By Dr Hoffman.—Dr Hoffman does not admit the validity of the explanation of this occurrence, which refers it to a disproportionately large pelvis or small head. If this were the case, the accident would be met with far more frequently than it is, and especially during premature labours. He believes it to be dependent upon an irregular contraction of the uterus, whereby the lower segment of the organ becomes unduly relaxed. He has never met with it in cases in which the pains have manifested their normal activity, but only in those in which they have assumed a spasmodic character. Upon these grounds he declares the mere reposition of the funis, unless the character of the pains can also be changed, to be of no avail; for the lower segment of the uterus not being applied to the head in these irregular pains, as it should be, the prolapsus is sure again to recur.

Moreover, the reposition of the funis is opposed by a general law which, however easily demonstrable, the author does not recollect to have ever seen stated. It is that *when during the progress of labour any portion of the ovum has quitted the cavity of the uterus, it can never be replaced.* As soon as any of the liquor amnii is discharged, the walls of the uterus become closely applied to the contour of the child, and the size of its cavity *pro tanto* diminished. Just in proportion as the parts of the child quit this cavity does its size continue diminishing, and neither a spontaneous or artificial return of these is possible. So it is with the funis; the cavity of the uterus having diminished in size since its descent, there remains no longer room for it. The general conclusion to be drawn is, that when the funis is prolapsed, to save the child, we must resort to turning, and place no reliance in the various instruments which have been contrived for its replacement.—*Zeitschrift für Geburtskunde*, Band xxv., p. 45; *and Brit. and For. Med. Chir. Rev.*, April 1849.

161.—*Quintuple Birth.* By James Russell, M.R.C.S.—On Sunday, January 14th, I was sent for to see Mrs W——, a healthy, well-formed woman, aged twenty-four, the wife of a shoemaker, living in Rochester Terrace, Rochester Row, supposed to have been with child between four and five months. She stated that, having occasion to go from home, she had proceeded but a short distance, when she was attacked with what appeared to be the pains of labour, and returned immediately; almost as soon as she entered the house, the membranes ruptured, and before I could get to see her, she had brought forth four fœtuses, and as I entered the room, another was born, making a total of five well-formed male fœtuses. The largest was six inches, and the smallest five inches long; of course they were all dead. There was not any hemorrhage, and each fœtus was expelled by one separate pain. The uterus now contracted so firmly that it was impossible I could get my finger within the os, for the purpose of removing the placenta; I consequently remained with her, and after an hour and a half, no other pain manifesting itself, I desired that she might take a draught, with infusion of roses, and a drachm of ergot of rye. This, in about four hours, was followed by a solitary pain, and the placenta came away. Upon examination, it was found to be of the ordinary size for the period, and had attached to it five umbilical cords, arranged in a circular form around the centre.

The case I have just described is interesting, both as to the number of pains, and the arrangement of the umbilical cords. I am aware there are cases on record where more than the number of fœtuses I have mentioned have been expelled at one birth, but I am in doubt whether in those cases the pains were limited to one for each fœtus, and whether there was one or more placentæ. The subject of this freak of nature has one child living, two years and a half old, and has had two miscarriages. She is progressing favourably, and has never had a bad symptom.—*Lancet*, Feb. 3, 1849.

162.—*Case of Hydrometra occurring in an Unimpregnated Uterus.* By Dr Grandidier. This case occurred in the person of D. F., aged twenty-one, unmarried, and of a scrofulous habit of body. In Nov. 1842 her menses, which had been very irregular, were arrested, and the belly began to swell, so that in twelve weeks it resembled that of a pregnant woman in her last months. The distension was as equable as in ascites, but a fluctuation was only very obscurely felt. The extremities were swollen, respiration hurried, and the urine small. Examination, *per vaginam*, having proved the groundlessness of the charge of pregnancy, she was treated by various hydragogues, &c., as for ordinary ascites; and it was not until paracentesis had been in vain attempted that a hydrometra was

diagnosed. Ten grains of *secale cornutum* were now ordered every two hours, until uterine action was developed. Great pain and anguish were thus produced, which continued for twenty-four hours, when (120 grains of secale having been taken) a small plug of mucus was expelled from the vagina, and followed by the uninterrupted flow of six *maas* (sixty-four oz.) of a clear watery fluid. The patient's sufferings were much relieved; her general condition improved; and while taking Stahl's pills her menses returned. Still her belly never resumed completely its normal size, and at intervals, varying from one to three weeks, there were gradually expelled other eighteen maas of the same fluid. In June 1843 she repaired to the sulphureous waters at Neundorf. The belly being as large as in advanced pregnancy, and the menses again disappearing, ten maas of fluid were discharged from the vagina. In August, seven maas, and in September, thirty-nine, were discharged; but after this period, the mineral waters and other means employed having removed the deranged condition of the digestive organs under which she had long laboured, and the discharge of water, *per vaginam*, which had probably accumulated during the stasis of the venous abdominal circulation, entirely ceased.—*Neue Zeitschrift für Geburtskunde*, Band xxiv., pp. 261-8; *and Brit. and For. Med. Chir. Rev.*, April 1849.

IV.—DIETETICS, HYGIENE, AND MEDICAL POLICE.

163.—*Bloody Rain on Articles of Food.*—Under the influence of circumstances, of which it would be difficult, if not impossible, to form at present a precise idea, there have occasionally been observed on bread and articles of food of various natures, spots of a bright red accurately resembling drops of blood. It is easy to conceive the terror which such a phenomenon would inspire, in times when there was no science to dispel the mystery which seemed to shroud it. During the seige of Tyre, Alexander himself was terrified by this appearance of blood-stains on the bread of the soldiers. At a more modern epoch, in 1510, similar spots having shown themselves on consecrated wafers, thirty unhappy Jews were accused of having caused their appearance by sorcery, and expiated their imputed sacrilege on the scaffold. Almost at our day, in 1819, these same red spots put into commotion the whole of Padua and its environs. In the beginning of the month of August of that year, a farmer of Legnaro, named Pilarello, was horror-struck on beholding drops of blood on a mess of maize pottage cooked the previous evening. His horror was redoubled, when several days after he saw similar spots on all his food, on fresh bread, rice, veal, fish, boiled and roasted fowls. The *curé* was called to banish the evil spirit, the presumed author of this terrible phenomenon, but all his spiritual efforts were unavailing, and it became evident to all the district, that the unhappy Pilarello was under the wrath of heaven. The rush of curiosity mongers to Legnaro becoming daily greater, and superstition having seized on this fact to draw from it many strange conclusions, it was thought proper to appoint a commission to enquire into the nature and causes of this phenomenon. M. Lette was entrusted with the investigation. On examining the miraculous blood spots under the microscope, he saw that they were formed of myriads of little bodies which he conceived to be microscopic fungi, and to which he gave the name *Zoo-galactina imetropha*. He even succeeded in propagating these little organisms, and gave a detailed history of them in an able memoir which was published in Venice in 1824.

In the course of 1848, the same phenomenon manifested itself at Berlin, and engaged the attention of Ehrenberg. This able micrographist has examined the red spots, and believes that he has recognised in them, not a microscopic fungus as Lette supposed, but an animalcule of the lowest class in the zoological scale, a monad, to which he has given the name of *Monas prodigiosa*, from its extreme minuteness. This little creature presents itself under the form of corpuscles, nearly round, about a 8000dth to a 3000dth of a line in size, which appear transparent when examined separately, but which, when viewed in mass, seem to be blood-red. They are terminated by a little rostral beak, in length equal to about the half of the entire body.

M. Ehrenberg has calculated, that to occupy the space of a cubic inch, would require from 46,656,000,000,000 to 884,736,000,000,000 of these monads [!]—*L'Union Méd.*, 1849, No. 26.

164.—*Chicory Coffee.*—The admixture of chicory with coffee, has of late been engaging the attention of the *Times* newspaper, and of its medical namesake. From

an article in the latter journal, we learn some curious facts, drawn from a memorial by Mr Cook, at present lying before the Lords of the Treasury and Board of Trade. It appears that when chicory was first imported to Great Britain, a duty was levied on it equal to that on coffee. As, however, it could be, and was, grown easily at home, it escaped the duty, and subsequently in 1840, was patronised by a treasury order "authorising the excise for the future, not to object to grocers selling chicory, or *mixing it with coffee.*" The effect of this has been—"what might have been expected, for while home grown kiln dried chicory can be delivered at 2½d. per lb. to the wholesale dealers (retailed at 8d. per lb.) the average price of duty paid on coffee is from 7d. to 9½d. per lb. Accordingly, even respectable grocers add at least 2 ounces of chicory to 14 ounces of coffee, *while others make the mixture half and half.* The most experienced officers of the excise estimate the average proportion of chicory to what is sold in London as coffee, at one-third; in the manufacturing towns in the country, it is said to be fully one-half."

It further appears that the chicory itself has been adulterated to such an extent, that the wholesale dealers were induced to take into their own hand the manufacture of the chicory which they sell, purchasing themselves the root, and kiln-drying it on their own premises.

On the effects of this practice on the commercial interests of the country, we do not care to enter. We concur with the *Medical Times* in his statements as to its deteriorating effect on the properties of the coffee itself. This adulterated stuff cannot possess the effects of coffee as an excitant of the nervous system, as an antispasmodic in asthma, and a stimulant in narcotic poisoning. It is true the qualities of the chicory are chiefly negative, it has no intrinsically bad qualities, but "even if chicory were proved to be the most wholesome and agreeable article in existence, it would still seem hard that it should be in the power of any dealer *legally* to foist it upon those who do not ask for chicory, but for coffee, and who part with their money in the full belief that coffee has been served to them."—*Med. Times*, March 3, 1849.

165.—*Bread for Diabetic Patients.* By Dr Percy.—It appears to be now generally admitted, that in the treatment of diabetes mellitus, amylaceous matter should in a greater or less degree be excluded from the diet. But, as is well known, under such restriction of food the diabetic patient soon becomes weary of the ordinary kinds of azotized matter, as beef, mutton, &c. Hence various substitutes for common bread have been proposed. Some years ago, Mr Morson, of Southampton Row, London, prepared at Dr P.'s request, specimens of bread containing gluten in various proportions. However, the result was not satisfactory; it was only relished by the patient when it contained a considerable quantity of starch; and when the proportion of gluten was increased beyond a certain amount, it became so tough and tenacious, as to be very difficult of mastication. Dr P. has also made trial of gluten bread, brought from Paris by Mr Morson, but with no better success. Recently Dr Prout has published a receipt for a kind of bread devised by his patient the late Rev. J. Rigg (*vide* Stomach and Renal Diseases, 5th edition, p. 44); and this is probably the best substitute for common bread which has hitherto been proposed. Some time ago Mr Charles F. Palmer of Birmingham prepared for Dr Percy, specimens of bread from Dr Prout's receipt; but patients to whom it was given complained of the difficulty in swallowing it, owing to the large quantity of bran which it contained. Mr Palmer then suggested the matter of rasped potatoes, left after the complete removal of the starch by washing, to replace the bran. He carried the suggestion into practice, and produced a kind of bread which well deserves the attention of the profession. It has been extensively employed in the General Hospital of Birmingham, and also by several private practitioners, with decided advantage. In composition it may be considered as Mr Rigg's bread, in which the bran has been replaced by the residual matter of the potatoe above mentioned. And in the fact of its being rendered light and porous by hydrochloric acid and carbonate of soda, precisely as in the preparation of Dodson's unfermented bread, it is, as must be obvious, an expensive article; but with many diabetic patients this will not be an object of consideration. It is improved in taste by being slightly toasted and eaten warm. The following is Mr Palmer's receipt:—

Take the ligneous matter of 16 lbs. of potatoes washed free from starch, ¾ of a pound of mutton suet, ½ a pound of fresh butter, 12 eggs, ½ an ounce of carbonate of soda, and 2 ounces of dilute hydrochloric acid. This quantity to be divided into eight cakes, and in a quick oven baked until nicely browned. At first gum-arabic in sensible quantity was also introduced into this bread, on the ground of the as-

sertion of Professor Graham, that when that substance is taken by the diabetic patient, the proportion of sugar evolved from his system is not thereby increased, and that consequently it might probably supply matter for pulmonary oxidation. However, it was found that it rendered the bread tenacious and disagreeable; so that its use was subsequently abandoned. This bread would probably be improved by the addition of a certain proportion of bran. Some gluten might also be added with advantage.—*Chem. Gaz.*, March 15, 1849.

166.—*Cleansing and Purifying of Feathers.*—The importance, in a sanitary point of view, which attaches to the purification of articles of bedding that have been long in use, and especially of those which have been used by persons suffering from contagious diseases, lends an interest to the following brief description of the different methods adopted by upholsterers for cleansing and purifying feathers:—

One system consists in washing the feathers, by which means they are cleansed from the lime, sand, &c., which are added to them to increase their weight—a fraud largely practised in Ireland, and with the usual effect of recoiling upon the culprits. This method is attended by the serious disadvantage, that the feathers are caked together in large lumps by the dirt and animal matter which is in them.

A second method consists in putting the feathers into an oven heated to a moderate temperature, and allowing them to get dry by degrees. They are afterwards put into canvass bags, and beaten with long poles. This is believed to be decidedly the best method which the upholsterers have of cleansing the feathers, as it is less destructive to the down than any other adopted by them.

But perhaps the best of the methods in common use is that practised in farm-houses. The oven, after being used for baking, is allowed to get moderately cool, when paper bags containing the feathers are put in, there to remain till the oven is cold. A portion of the animal matter is absorbed from the feathers by the paper bags, which accounts for the superior purity of farm-house beds.

Another method which we have had an opportunity of witnessing consists in first exposing the feathers, after the fragments of quill have been picked out, to the steam arising from a chemical solution, then spreading them on a floor to dry, and lastly, separating all the lighter adhering matters by mechanical means. In this way the feathers are completely purified, and all adhering matter removed, the feathers still retaining the elasticity on which their value depends. Beds so purified lose a considerable fraction of their weight, but gain in bulk, softness, and elasticity. This very efficient process is the invention of Mr Gilbert of Tyssen Place, Kingsland Road.—*Journ. of Public Health*, Oct. 1848.

[We had recently an opportunity of carefully inspecting Mr. Gilbert's process. The first trial was made on a lot of very inferior, dirty-looking feathers, such as would have been entirely rejected by some upholsterers. Their appearance, on being thrown out from the boiler, quite surprised us. They were clean and elastic, and had lost entirely the oily feeling they formerly had.

In another trial, a quantity of feathers, which appeared perfectly good and clean, had so much dust and oil removed from them that their weight was considerably diminished.

Mr G. has frequently obtained from a bed, considered "clean and pure," as much as 14 lbs. of dirt and unwholesome animal matter. The process does not occupy more than a few minutes.]

167.—*Hygienic Properties of Animal Charcoal.* By M. MOZIERE.—The removal of bad odours by charcoal is notorious, but it is not so generally known that it possesses the property of removing from waters the calcareous salts, and even the greater part of the saline matters which they contain. It is to this property, which was discovered by Payer in 1822, and which belongs exclusively to animal charcoal, that M. Mozière directs attention. It is well known that many waters are rendered unfit for the use both of man and animals, not merely by their excessive proportion of saline constituents, but by putrescent matters, and it is of vast importance to possess a means of easily removing both these sources of deterioration. M. Girardin, of Rouen, has found that the unpleasant saline or alkaline taste of waters may be corrected by throwing a few pounds of animal charcoal into the cisterns, and according to M. Mozière it is easy to effect the purification of calcareous waters by passing them through a very simple filter, constructed in the following manner:—

A barrel, set upright on one end, is divided into three compartments, by two horizontal diaphragms; the water to be filtered is poured into the upper compartment; the second compartment contains a layer

of animal charcoal between two layers of sand, the whole enclosed in a woollen cloth; the lower compartment receives the water as it filters through; and to enenable it to reabsorb the air which the charcoal has removed from it, holes are made in the sides of the upper part of the lower compartment, and the water is exposed to the air, by making it fall on a dish, shaped like a mushroom, fixed on the bottom of the barrel. At the bottom of the upper compartment, a contrivance, like the head of a watering pan, is placed to retain the solid matters which the water may contain. The water thus filtered is agreeable, and fit for drinking and cooking.—*Journ. de Chemie Médicale*, Feb. 1849.

[This is on the same principle as the patent filters in common use here. The diaphragms, we presume, are to be made of wood, pierced with gimlet holes. A moveable diaphragm of flannel, in the upper compartment, would answer for keeping back solid matters better than the author's "watering pan" (*arrosoir*), the exact application of which, as given by him, we do not understand. This would make a cheap filter for farms or villages supplied with water of bad quality.]

168.—*Proportion of Nicotine in Tobacco.* By M. Schlosing of Paris.—The author has found, in 100 parts of dry tobacco, the following proportions in the various kinds:—

Lot et Garonne	7·34
North [of France?] ...	6·58
Ille et Vilaine	6·29
Pas de Calais	4·94
Alsace	3·24
Virginia	6·87
Kentucky	6·09
Maryland	2·29
Havannah, less than ...	2·

The varieties containing most nicotine are most useful for making snuff. It appears, moreover, that in the preparation which the tobacco undergoes, more than two-thirds of the nicotine is lost by the fermentation of the leaves. Ammonia exists in snuff, in the form of a salt. Nicotine exists there as salt or subsalt. It is to the presence of these substances that we must ascribe the stimulating qualities of snuff.—*Gaz. des Hôp.*, No. 126.

[These results correspond in a great measure with a table given by Dr Thomson in his "Vegetable Chemistry," apparently from analyses made by a French chemist, though this is not stated.

According to Duflos, some snuffs are acid, or feebly alkaline. The latter contain ammonia. The former developed acetic, or purposely added hydrochloric acid. The acid snuffs are generally more or less mixed up with foreign matters, technically termed *sauce*. In some red oxide and cinnabar, in others orpiment, have been found.]

169.—*Effects of Sudden Changes of Temperature.*—It is well known that the Russians expose themselves, generally without any bad effects, to remarkable changes of temperature, passing, as they often do, from rooms heated to 100° Fahr. into the open air, where the thermometer is nearly at zero. But strangers who have passed part of their lives in warm climates, generally sink under it rapidly. A German physician, Von Litterow, states that at Perm, a town to the south of St Petersburgh, there was no example of a German surviving this practice more than five or six years, if he settled there as an adult. Children and young persons appear, on the contrary, to accommodate themselves pretty well to the rigour of the climate. But the Russians themselves are not exempt from peculiar accidents arising from these sudden variations of temperature. It sometimes happens, that in approaching an open door or window, they experience a very disagreeable sensation, followed by general constitutional disturbance; and immediately they are seized with sense of rending of the limbs, intense headache, and acute pains about the eyes. The only thing to be done is to restore the suppressed cutaneous transpiration. For this purpose the patient is put to bed, is buried literally under a mountain of clothes and coverlets, and drinks a large quantity of tea, as hot as possible. Diaphoresis soon occurs, and the patient, who appeared dying, is in a quarter of an hour as gay and well as if nothing had happened. It is true that the Russians perspire with remarkable facility, a circumstance due undoubtedly to their frequent use of hot baths, and of drinks at almost boiling heat.—*L'Union Médicale*, No. 13.

170.—*Prison Discipline.*—In a report laid before the Academy of Medicine of Turin, Dr Bruna Guiseppe Carlo has given an account of the hygienic and sanatory condition of the prison for young criminals at Turin. This establishment is under a mixed regulation, as regards isolation of prisoners; they are separated during the night, but work together in the day. It has been open since 1845, and in 2200 prisoners who have been received, there have occurred only 229 cases of illness in three years, and a single death in

July 1847, from phthisis. The number of such prisoners is very inconsiderable, averaging only two or three per cent. per diem, while in other penitentiaries the proportion is five, six, or seven per cent. At first, young prisoners under eighteen years of age, were received in this prison, but it was soon seen that this limitation of age was still too high, and it has been reduced to sixteen years.—*L'Union Méd.*, 1849, No. 26.

V.—MATERIA MEDICA AND THERAPEUTICS.

171.—*On an Improved Method of Preparing Collodion for Application to the Skin.* By Mr STARTIN.—Mr Startin observes that a varnish intended for application to the cutaneous surface should possess the following qualities. It should be opaque, of a colour resembling that of the skin, elastic, and lastly porous, so as to imitate as nearly as possible the cuticle, and avoid the heat and irritation which attend the application of an impermeable covering to the skin. The colouring is readily attained by adding to the collodion an ethereal tincture of turmeric or saffron, and of red Sander's wood, or alkanet root, so as to produce the required tint. The opacity and elasticity are best accomplished by the addition of a drying or a fat oil, as linseed, cocoa nut, pure cod liver, or lard, previously dissolved in ether; the proportion being half a drachm to a drachm of oil, to an ounce of collodion,—the exact quantity being regulated by the greater or less degree of elasticity and opacity required. It is remarkable how completely this simple procedure will accomplish the desired end; for by its means, and the coloured collodion, so exact a representation of the cuticle can be obtained, that the varnish produced, when applied in a thin coat, cannot be distinguished as differing from the surrounding skin, without close observation and magnifying power. It would also appear to be equally elastic with the cuticle, whilst its contractility is much modified, or entirely lost, according to the proportions of the oil employed: care must, of course, be taken to *use the best materials only*, or the colour will not be permanent, but liable to change to a yellow dirty hue, whilst it will prove an irritant instead of a soothing application. The fourth object alluded to, namely, that of rendering the varnish porous, is obtained by the addition of a small quantity of purified, highly concentrated, nearly anhydrous glycerine. With this substance the prepared collodion can be rendered as soft as a thin layer of ointment, which it resembles in most respects, except that it forms over the part a uniform covering which is coherent, and not liable to be washed away by slight discharges, or external gentle ablutions, whilst it does not require the support of lint or linen. As a simple varnish in cases of chaps, chilblains, and other minor affections of the cutis, at this season so prevalent, the prepared collodion will be found useful, and in the bed-ridden, who are not provided with the hydrostatic bed, it will be found no ordinary boon, as also in cases of incontinence of urine, and excoriations from the pressure of instruments, trusses, &c.—*Medical Times*, Dec. 23, 1848.

172.—*Means proposed to Remedy the Fragility of Nitrate of Silver Crayons.* By MM. CHASSAIGNAC and BLATIN.—The brittleness of nitrate of silver is the source not only of considerable loss of the material itself, but frequently of danger to the patient, as when the fauces, œsophagus, urethra, bladder, and cavity of the uterus are being cauterized. M. Chassaignac has succeeded in remedying this evil, by having in the centre of the stick of caustic a thread of platinum wire. M. Blatin secures the same object by a wick of cotton, which is placed in the mould before the fluid nitrate is poured into it. The crayon thus prepared is rendered more solid, and, when broken, the fragments remain attached to one another.—*Bulletin de Thérap.*, January 1849, and *L'Union Méd.*, Jan. 18, 1849.

LONDON: JOHN CHURCHILL, PRINCES STREET, SOHO.
EDINBURGH: SUTHERLAND AND KNOX, 23, GEORGE STREET.
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MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

JUNE, 1849.

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I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

173.—*Exhalation of Carbonic Acid in Health and Disease.*—(In a memoir read to the Academy of Sciences by MM. Hervier and St Lager).

Physiological State.—1. The exhalation of carbonic acid varies from hour to hour, with the variations of the barometer, having two maxima, at nine in the morning and eleven at night; and two minima, at three in the afternoon and five in the morning. The morning maximum is greater than that of the evening.

2. The variations (the increase?) of temperature and of barometric pressure act inversely in relation to the exhalation of carbonic acid, the former diminishing, the latter increasing it.

3. During digestion less carbon is burned.

4. The use of animal food diminishes, while a diet exclusively of feculents increases, the quantity of carbonic acid.

5. In a rapid race, the expired air ceases to contain carbonic acid.

6 Inspiration of ether and chloroform produces the same effect.

7. The use of alcoholic drinks has the same effect.

8. During sleep less carbonic acid is expired than in the waking state.

9. The air expired by infants contains a larger proportion of carbonic acid than that breathed by adults.

Pathological State.—1. In well-defined phlegmasiæ in general, the exhalation of carbonic acid is increased.

2. In inflammations of the organs of circulation and respiration, however, or in such as tend to impede the action of these organs, this rule is reversed.

3. In the paroxysms of intermittent fever there is an increase of carbonic acid, especially in the last stage.

4. In diseases not accompanied by fever or marasmus, such as chlorosis, diabetes, nervous affections, there is no variation in the expiration of carbonic acid.

5. In the exanthemata, including erysipelas and erythema, there is diminished exhalation of carbonic acid.

6. The same is the case during suppurative process; and also in scurvy, purpura, anæmia, and anasarca.

7. In the last stage of scrofulous, syphilitic, cancerous cachexiæ, and in pulmonary consumption, the exhalation of carbon is likewise diminished.

8. The same thing takes place in typhoid fever, dysentery, and chronic diarrhœa.

In addition to these conclusions, the authors find that the temperature of the expired air does not vary sensibly in the state of health, but that in disease it varies with the number of respirations.—*Gazette des Hôpitaux*, Feb. 20, 1849.

[It will be seen from the following article that diametrically opposite results to the above have been arrived at on one of the points above-mentioned; and we have not before us any details of the experiments in either case by which to judge of the source of the difference.]

174.—*Effects of Ether on the Phenomena of Respiration.* By MM. VILLE and BLANDIN.—After making a series of experiments, these gentlemen have found that, in the state of complete insensibility and apparent death which follows the inhalation of ether, there is more carbonic acid produced by the lungs than there is during the natural play of these organs; and they further add, that, in the course of etherization, the amount of carbonic acid which is given out by the lungs is in a direct proportion to the insensibility.—*Comptes Rendus*, xxiv., p. 1016; and *Brit. and For. Medico-Chir. Review*, January 1849.

175.—*On the Minute Structure and Mode of Contraction of Voluntary Muscular Fibre.* By W. MURRAY DOBIE, Esq.—The first part of the author's paper contains a short statement of the various discoveries which have been made in the minute structure of voluntary muscle. The last author referred to is Mr Bowman, who has described the ultimate fibrilla of muscle as composed of clear and dark spaces, arranged alternately in longitudinal series. The author then refers to the descriptions taken by various writers from the specimens of muscular fibre prepared by Lealand, a London optician. These specimens show the ultimate fibrilla to consist of clear, oblong, rectangular spaces, bounded by a distinct line, and joined end to end. In the centre of each there is a small, dark, oblong space, between which and the peripheral line of the clear space there is a clear interval. From his observations on the muscles of all classes of animals, the author considers that the structure of muscle is still more complex than has yet been described. He finds an ultimate fibrilla to consist of quadrilateral spaces, which are of two kinds—the dark and the clear; these alternate regularly, and are arranged in single longitudinal series.

The dark and the clear spaces are sometimes equal in length—more frequently the latter are the shortest, and in the lobster and salmon appear sometimes as a mere line. When the fibre is stretched, the clear space is elongated and flattened, while the dark space appears somewhat elevated. These spaces are bounded laterally by a distinct line, which appears continuous; they are also separated from each other by distinct lines.

The clear space is crossed transversely at right angles by a *dark* line, which divides it into two equal quadrilateral spaces. The dark space is similarly divided by a *clear* line. Each space, therefore, consists of two compartments, which are similar in every respect to each other. Such is the appearance presented when the centre of the fibrilla is in perfect focus. When the surface is brought into focus, the light space appears *dark*, and does not show a cross line, while the dark one appears light, and shows the cross line *dark*, and more decided than before. The author has further found that, when the fibrillæ are separated, a delicate homogeneous membrane stretches from one to the other. This membrane is quite distinct from, and much more delicate than, the sarcolemma. In the skate it is striated, the striæ corresponding to those seen on the fibrillæ; this appearance is attributed to the membrane

being more elevated or thicker opposite the dark spaces.

The author has made some observations on the contraction of muscular fibre, as it is seen to take place in the tail of the tadpole, when the animal is placed uninjured under the microscope. On contraction taking place, the transverse striæ are seen to approach rapidly, and to recede as rapidly on relaxation. The blood is driven from the part by the contraction of the muscle, but again returns on relaxation taking place.

Mr Dobie concludes his paper with some directions as to the mode of preparing specimens.—*Annals of Nat. His.*, Feb. 1848.

[We have ourselves repeatedly observed the phenomenon of muscular contraction in the tail of the tadpole, and the remarkable acceleration which takes place in the circulation in the neighbourhood of the part thrown into action.]

176.—*On the Absence of Vomiting in the Horse.* By M. Flourens.—Every one knows that the horse cannot vomit; but, as to the cause of this peculiarity, there has been a difference of opinion. From his experiments and dissections, M. Flourens is led to the conclusion, that the obstacle to the reflux of the contents of the stomach,—which is such as to prevent the exit of a single drop of fluid by the pylorus, when the stomach has been distended with water and subjected to violent pressure,—is to be found partly in the very oblique mode of entrance of the œsophagus, and partly in the peculiar arrangement of the muscular fibres. These are so disposed, that various bands, arising from the coats of the stomach, pass round a portion of the tube, and then return into the muscular wall of the viscus; from which it results that, the more the latter is distended, the greater will be the constriction exercised around the pyloric orifice.—*Annales des Sciences Naturelles*, September 1848, *and Brit. and For. Med. Chir. Rev.*, April 1849.

177.—*On the Pancreatic Fluid.* By Dr C. Bernard.—Dr Bernard, after describing the mode in which he obtains the pancreatic juice in the living animal, states as the general result of his thirty-four experiments, that when it is desired to obtain the largest portion of this fluid, the experiment must be performed at the commencement of digestion, and conducted with such celerity as to leave the pancreas exposed for as short a time as possible. In this way the secretion of the juice does not become suspended; the quantity obtainable never, however, exceeding thirty grains per hour in a large dog. But a very important circumstance, which has never hitherto been remarked, is, that the secretion of the pancreas becomes considerably increased under the influence of the inflammation consequent on the operation, which sometimes is set up shortly, and in other cases not for a day or two. This increased secretion has, however, become deprived of the physiological properties of the normal fluid; so that, under different circumstances, the experiment may furnish us with a normal or a morbid juice.

The *normal* fluid is colourless, limpid, and viscous, flowing slowly out in large pearly or syrupy drops, and frothing-up on agitation. It possesses no peculiar odour, and imparts to the tongue a saline taste like that of the serum of the blood. It is invariably alkaline. Exposed to heat, it coagulates into a very white, concrete matter, as completely as does the white of an egg—not a drop of free liquid remaining. It is also precipitated by nitric acid, sulphuric acid, and concentrated muriatic acid. Alkalies redissolve the coagulated matter. We may allow, with Magendie, Tiedemann, and Gmelin, that this fluid possesses the characters of albumen, but in a physiological point of view, there is no relation between it and albuminous fluids; and indeed chemical distinctions between the two exist. Thus, when the organic matter of the pancreatic juice has been coagulated by alcohol and dried, it may be easily and entirely redissolved in water, to which it imparts the viscosity and physiological properties of the pancreatic juice.

The *morbid* pancreatic juice is generally colourless, sometimes opalescent, and at others reddish, possesses no viscosity, and produces a nauseous saline taste. It is less dense, and coagulates neither by heat or acids. The transformation of the normal into the morbid juice is so gradual, that various intermediate shades exist, as indicated by the quantity of coagulable matter, upon the amount of which the activity of the juice depends.

No fluid of the economy is so liable to alteration. Exposed to a low temperature (42° to 52°), it may be preserved for several days, increasing in viscosity, and acquiring the condition of a light jelly. Exposed to from 104° to 112° for some hours, its properties, with the exception of the alkaline reaction, become entirely altered. During the heats of summer, or in stormy weather, such changes may be effected in a few moments. The deposition which takes place furnishes to the microscope a peculiar silky

aspect, and a large quantity of needle-shaped crystals, resembling those of margarine or margaric acid. These changes in the composition of the fluid explain the discrepancies of authors in respect to its quantity of albumen.

The special action of the pancreatic juice on neutral fatty bodies out of the body.—Exposure of fatty bodies to the juice, at once produces a complete emulsion, and all fatty substances are resolved into glycerine and fatty acid, and in the case of butter, butyric acid. Parallel experiments instituted with other fluids, as bile, saliva, gastric juice, serum of the blood, produce no such effects on fatty bodies. These experiments have been frequently verified in the presence of distinguished men, as Magendie, Berard, Andral, &c. If a *morbid* or *altered* juice be employed, it exerts no action, soon separating from the fatty matter without modifying it. Partial changes are attended with imperfect results.

The pancreatic fluid is indispensable for the absorption of fatty matters, and the formation of chyle. The chyliferous vessels are only found to contain a white, milky, homogeneous fluid, on condition of their having absorbed fatty matters in the intestine; so that a limpid, transparent chyle (improperly called vegetable chyle) is a chyle without fatty matters; and a white, homogeneous chyle (improperly called animal) is a chyle containing fatty matters, emulsioned and modified. That this is effected by the agency of the pancreatic juice, may be demonstrated. If dogs are killed during digestion, oil will be found unaltered, until it comes in contact with this fluid; and if the pancreatic ducts be tied, all alteration is prevented. In the *rabbit* the pancreatic duct opens into the intestine very low down, fourteen inches below the choledochus; and if fatty matters be introduced into its stomach, and the animal be killed in three or four hours, they will be found to become emulsioned only at that low distance down, and only after then it is that the white absorbents are seen.

If it be asked how it happens that a fact now so easy to demonstrate, that it is the pancreatic fluid and not the bile which emulsions fatty matters, has been overlooked, the author is disposed to attribute it in a great measure to the prevalent belief in the salivary character of the pancreatic fluid having misled inquirers. Brodie's experiments on *cats*, showing that the chyle was rendered limpid by ligature of the choledochus, were not verified by those of Magendie on *dogs*, who found the fluid milky and homogeneous. But in the *cat* the pancreatic duct anastomoses with the choledochus before opening into the intestine, so that Brodie, unaware of the importance of the pancreatic juice, might easily have tied both vessels; while in the *dog* the choledochus is completely isolated from the two pancreatic ducts of that animal—*Archives Générales*, tom. xix, pp. 60-81, and *Brit.* and *For. Chir. Rev.*, April 1849.

II.—PRACTICE OF MEDICINE.

178.—*Clinical Observations on the Pathology and Treatment of the Dropsy which follows Scarlet Fever.* By Dr S. SCOTT ALISON.—The author, in the first portion of his very interesting paper, illustrates the natural history of this disease, by a reference to twelve cases, selected from many which have recently come under his own observation, because they were narrowly watched, and laboriously recorded as materials for future comparison and analysis. The views of the author are, however, more fully given in the following part of his paper, in which he offers some general remarks on scarlatina dropsy. Speaking of the differences in the twelve recorded cases, as founded on the presence of albuminuria and desquamation of the cuticle, the author classifies his cases under four heads. 1. Anasarca with albuminuria and desquamation, illustrated in four cases. 2. Anasarca with albuminuria and without desquamation, illustrated in two cases. 3. Anasarca without albuminuria, but with desquamation, illustrated in two cases. And, 4. Anasarca without albuminuria or desquamation, illustrated in two cases.

In regard to the causes of dropsy as occurring after scarlatina, the author thinks that cold has too generally and absolutely been considered as the exciting cause. Under the greatest care and best management, cases of the disease have occurred; he believes, therefore, that in some cases, as in these, the dropsy is a natural consequence of scarlet fever, and not one which, had greater caution been exercised, might have been warded off. A careful observation of such cases has led Dr Alison to believe, that in them blood-letting and very lowering practice can seldom be borne. In cases of partial œde-

ma, confinement to bed, and the exhibition of purgatives, are alone required. In those cases where the circulation is excited, and congestion of the kidneys obviously exists, perspiration, and the free action of the bowels, should be early secured, and blood taken from the loins by means of leeching or cupping. In the event of the disease of the kidney remaining obstinate, a seton in the loins will form a most useful drain. In some cases the author has found suppression of urine continue, notwithstanding the exhibition of diuretics, and in other cases where these have not been employed, he has found the urine to regain its normal amount and characters. Such facts point to a careful discretion in the employment of this class of remedies. The diet should always be a well regulated one, the unnecessary consumption of azotised food, in particular, avoided. As means capable of diminishing the liabilities to dropsy, the employment of the warm bath is highly recommended—the author has found it serviceable, when taken every night during the continuance of the eruption. The security of sufferers from scarlatina would be much greater if, however mild the disease, they were detained in bed during the eruption, and for several days after its decline; and further ordered to remain within doors for three or four weeks from the commencement of the eruptive disease.

The dropsy following scarlatina is, like other dropsies, attended by inflammatory symptoms, the result of increased exhalation; it, therefore, differs materially in this respect, from chronic or passive dropsy, the consequence of venous obstruction and diminished absorption. The cellular tissue is the first seat of dropsy after scarlatina, and then the serous cavities become occupied; here, from the liabilities of the pleura, peritoneum, &c., to inflammation, the effusion is frequently mixed with coagulable lymph, or is sero-purulent. Judging from the 2d and 4th division of his cases previously referred to, the author believes that no essential connection subsists between the presence or absence of desquamation and the dropsy; and judging from other cases enumerated in that division, he believes the existence of albuminuria likewise not essential to the production of dropsy. The reduction in the amount of the secretion of urine, the author has noted as occurring in nearly all his cases; in two, which proved fatal, the amount, during twenty-four hours, was reduced to a few ounces. In some cases of scarlatina, however, on which no dropsy supervened, the quantity of urine voided has been observed by Dr Alison to be a "mere trifle." This fact, taken in connection with the changes observed in the secretion itself during eruption, the author thinks favours the idea of the kidney becoming the seat of disease at a very early period. The changes noted have been—an abnormal colour; an unnatural odour; in one case the discovery of albumen on the third day of illness; the sp. gr. in some cases 1·005, in others, as high as 1·030; the deposition of the urate of ammonia, and of uric acid on adding nitric acid. The author has only had one opportunity afforded him of examining the body of a patient dying at an early stage of the disease, the fifth day, before the eruption had declined. Convulsions terminated the case. The left kidney was found larger than the right (it generally is so), and was much congested; the right kidney was normal. The author attaches great importance to the early affection of the kidney: when it escapes implication, it is merely, he thinks, in the same way that the skin presents no eruption, and the fauces are not affected. In his opinion it is at once the cause of the suppression of the secretion of urine, of its alteration (as containing albumen), and of the general dropsy. In the experience of the author the cases of scarlatina most likely to be followed by anasarca, are marked by smart inflammatory fever, not very violent, and general vivid persistent eruption, or repressed eruption, moderate inflammation of the fauces, persistent desquamation, and scanty, turbid, high-coloured urine, sometimes of a reddish tinge. On the other hand, those cases least likely to be followed by dropsy are marked by fever of an asthenic type, and in which local disease of serious import manifests itself in some organ remote from the kidney. Very mitigated forms of the disease, have, in his experience, been altogether exempt from dropsy.—*Lond. Jour. of Med.*, No. 3, March 1849.

[From the unusual prevalence of scarlatina in Edinburgh, during last winter, we have had abundant opportunities of carefully and frequently examining the secretion of urine, and have been enabled to note, from day to day, the changes presented in its characters. An account of these changes, in so far as one particular and very important one—its coagulability in the simple cases—is concerned, was published in the January Number of the *Monthly Journal*, and in regard to it, we need only here observe, that more recent observation has in other cases con-

firmed our statements. Our experience, in regard to the amount of urine voided in the eruptive disease, differs materially from that of Dr Alison; the quantity always continued good, certainly as good as during the same stage in other febrile diseases. When the quantity fell, it was always a most valuable prognostic sign of the occurrence of dropsy. During the period of eruption, and up to the occurrence of desquamation, the colour varied but little from that of health, and the sp. gr. of the urine was normal. In general, after standing for a short period, amorphous urates were deposited—the reaction being invariably acid. Shortly after the period of desquamation was reached, the following changes ensued:—The urine, from being clear, became muddy, epithelium in large quantity was always detected by the microscope, albumen in small quantity by heat and nitric acid; amorphous phosphates were not unfrequently deposited by heat. At this stage of the disease it is, that the examination of the urine is peculiarly valuable; a decided diminution we have always observed, in cases where dropsy has supervened; on the other hand, in cases unattended by dropsy, the quantity has always remained normal; in a few has increased from that time. The changes in the condition of the urine, noticed by Dr Alison, have really not any very special significance in the urine of a febrile disease, at a time, too, when the fever is at its height; they are equally well marked in the urine of ordinary continued fever, about the same period of the disease, and yet renal affection is not generally considered as essentially connected with this affection. We are inclined to differ from Dr Alison in the importance he attaches to the affection of the kidneys in the early stage of the disease; at all events, his examinations of the urine, and his single post-mortem inspection, have failed to convince us of that importance.—J. W. B.]

179.—*On the Treatment of certain forms of Neuralgia.* By Dr SANDRAS.—Dr Sandras has been long known for his researches in various points connected with neuralgia. The present paper is devoted to the consideration of certain local forms of this affection, his point being to show that the treatment must be modified according to seat of the affection.

Neuralgia of the fifth pair yields more readily than any other to the administration of extract of belladonna, of which a third of a grain may be given every quarter of an hour, or nearly a grain as a single dose. He prefers this medicine to the extract of hyoscyamus, to the meglin pills,[1] and to morphia, whether given internally or applied according to endermic method. This last (the endermic) method ranks, however, next to the belladonna. He has seen good effects from a plaster containing black[2] cyanide of potassum. He has no faith in electricity or in the magnet, but finds that pressure on the artery anterior to the painful spot causes an immediate alleviation.

Of the subdivision of this form of neuralgia, he observes, that in *temporal* neuralgia in addition to the administration of belladonna, the temporal artery must be compressed, and the jaw held as fixed as possible.

In *sub* and *supra-orbital* neuralgia, the endermic application of muriate of morphia, as of cyanide of potassum, answers better than in temporal, ocular, or cervical neuralgia.

Sub and *supra-maxillary* yield more readily to belladonna than any other variety. The maxillary artery should be compressed at the side of the lower jaw.

Neuralgia of the *eye* also yields very readily to belladonna.

Neuralgias of the ear and in the cervical regions yield more readily to topical applications of opium than to the internal administration of belladonna. Compression, which affords much relief in neuralgia of the ear, is of little service when the neck is affected.

He likewise notices the form of neuralgia connected with the brachial plexus. These, as also sciatica, crural, and intercostal neuralgia, are most readily removed by the endermic application of the salts of morphia. In the last case he adds, that to lessen the pain accompanying the act of respiration, a combination of extract of belladonna and datura stramonium may also be administered with advantage.—*Gaz. Méd.*, No. 53, 1848.

180.—*On Polydipsia.* By M. VIGLA.—M. Vigla took the occasion of an example of this rare form of disease being in the Hotel-Dieu to deliver a clinical lecture upon it. It occurred in the person of a shoemaker, aged forty, who, two months before admission, suffered from severe frontal neuralgia. Shortly before he came in he was seized with so tormenting a thirst, that he was forced to drink six or

[1] These pills contain a grain each of extract of hyoscyamus, powdered valerian root, and oxide of zinc.

[2] We must confess that we do not know what salt is meant by the *cyanure noir*. The ordinary cyanide of potassum of the French pharmacopœia is *white* salt.—ED.

seven quarts of water a day, and two or three by night. This state continued for three weeks, during which the neuralgia entirely left him; but a week prior to admission the thirst diminished and the neuralgia returned. Blisters to the head and purgatives relieved this; but the thirst now returned as intensely as ever. On the 2d of November he was found to have passed from eight to ten pints of urine since the prior evening, which was of a very pale citron hue, inodorous, nearly neutral, and of a density (1002) but little above that of water, &c. The tongue was nearly normal, the gums pale, mouth dry, and spitting difficult, saliva slightly acid, and so sparing that he could not swallow two mouthfuls without drinking; appetite gone, having some desire for vegetable food, and a loathing for animal. No pain in the abdomen, and stools are normal. Skin dry, and very susceptible to cold. Some emaciation; little sleep; suspension of sexual desires; pulse fifty-six, and regular.

There are three diseases in which excessive thirst and secretion of urine are prominent symptoms; polydipsia, diabetes mellitus, and diabetes insipidus. *Polydipsia* is distinguished from *diabetes mellitus* by there being no sugar in the urine, and mere congestion or augmentation of volume of the kidney, but no organic change. Although the odour of diabetic urine is slight, it is of a more animalised nature than that of polydipsia; and if the latter be left to itself, it passes into the putrefactive fermentation, while that of diabetes passes into the alcoholic, depositing a whitish substance, which is a true ferment. The difference of *density* sufficiently distinguishes the two urines; for while that of diabetes furnishes a specific gravity of from 1026 to 1044, that of polydipsia furnishes one of but from 1000 to 1004, or at most 1008: the density in the one affection being greater, in the other less, than in any other disease, and forming the two extremes of the scale. The urine of diabetes polarises light, which that of polydipsia does not. In diabetes the appetite may be much increased, while in polydipsia it is diminished; meat and gelatinous aliment are taken and digested in the former, vegetables in the latter. Nutrition is much more seriously affected in diabetes than in polydipsia; the continued emaciation, in spite of enormous alimentation, observed in the one, not taking place in the other. The diabetic patient easily takes cold, each cold becoming more and more obstinate, and usually terminating in phthisis. All those patients who do not die of a complication of the original disease, die tuberculous, a termination not observed in polydipsia. Arrived at such a period, the diabetes may seem cured; but in fact less sugar is secreted, because the patient now takes less food whence to elaborate it. Towards the end of the case the patient becomes œdematous, which he does not in polydipsia. Polydipsia does not easily make ravages in the constitution, the patient bearing it as well for twenty years, as for six months, which is very far from being the case with diabetes. In both affections, the complication of a febrile disease may temporarily suspend their course. In one case seen by M. Vigla, the polydipsia was suspended during an intense reaction excited by blisters, and reappeared when this had subsided.

As to *diabetes insipidus*, M. Vigla is aware of no well-ascertained example of such a disease, which, without sugar in the urine, gives rise to emaciation and eventual phthisis.

The *causes* of polydipsia are unknown. It may occur at any age, in any climate, and in either sex. Generally its access is sudden, and it becomes fully developed in a few days. M. Vigla regards both it and bulimia as *neuroses*, deranging the health no more, or even less, than other neuroses. It obstinately resists all treatment; the only remedies which are of any occasional avail being anti-spasmodics.—*Gazette des Hôpitaux*, 1848, No. 130; *and Brit. and For. Med. Chir. Rev.*, April 1849.

181.—*On Crises and Critical days in Pneumonia.*—The question of the actual existence of critical days in various acute diseases is at least as old as the time of Hippocrates. In the first twenty days of disease the critical days were, according to him, the fourth, seventh, eleventh, fourteenth, seventeenth, and twentieth. Andral having examined this point in eighty-six cases, of which he had a perfect history, has found that in much the greater number of cases the disease *terminated* on the seventh, eleventh, fourteenth, or twentieth day (*Clinique Médicale*,[1] 2d ed., t. i., p. 558). In thirty-six cases of non-traumatic pneumonia, observes Dr Josset, critical phenomena were carefully watched for twenty-three times. In thirteen cases there was a crisis by the urine, in three by sweats, and in one by epistaxis—in all seventeen cases. In the remaining six there were no critical phenomena. It is worthy of remark that of the seventeen cases where one or other of these critical phenomena presented themselves, thirteen

[1] In Spillan's Translation the cases observed by Andral are 112. See page 402 of that work. The result is, however, the same.

were in perfect accordance with the Hippocratic law; four only terminating on non-critical days. It must be added that the six cases in which no appearance of a crisis could be detected, terminated fatally, and on non-critical days, while the seventeen cases in which there was a crisis, terminated favourably, with only a single exception. In reference to the thirty-six cases observed by M. Josset, it is worthy of observation that (1) out of twenty-seven cures, twenty-two took place on critical days and five on intercalary days;[1] and that (2) all the deaths, amounting to nine, took place on non-critical days, including, however, three intercalary days.—*Gaz. Méd.*, No. 53, 1848.

182.—*On a Sign indicating the Threatening of a Relapse in Intermittent Fever.*—M. Vanoye maintains that the appearance of the conjunctive lining of the lower eyelid is of diagnostic value in this affection. In the normal state it presents a more or less bright red tint, but in persons who have long suffered from intermittent fever, it often presents a pale streak, running round the lower portion of the globe of the eye. On depressing the eyelid, and making the patient turn the eye upwards, this streak presents a crescent-like form, the concave border surrounding the lower portion of the sclerotic, while the convex border may be traced in the palpebral conjunctiva. The degree of paleness of this streak is proportional to the degree of the disease. From numerous observations M. Vanoye draws the following inferences: 1. That where this appearance does not exist, the fever has usually not been of long duration, or at all events that it will soon yield, without being followed by a relapse. 2. That where it does exist, the due administration of a febrifuge sometimes causes it to disappear in a very short time, and that then there is no fear of a relapse. 3. That when it persists, after the disappearance of the febrile symptoms, there is a relapse in the great majority of cases, and it is not till this streak disappears that we can feel sure of a thorough cure.—*Ann. de la Soc. Méd. de la Flandre Occidental*, 1848. [We shall be glad to hear from those of our readers who practise in places where intermittent fever is common, whether they can confirm the observations of M. Vanoye.]

[1] Intercalary days were days on which crises sometimes occurred, although much more rarely than on critical days. They were the third, fifth, sixth, and ninth days. On this subject we may refer to Mr Adams' learned Commentary to Paulus Aegineta, vol i., p. 196.

183.—*On the Diseases of the North American Indians.* By Dr THOMAS STRATTON, R.N.—The author has been stationed in Canada for several years, and has enjoyed opportunities of seeing and treating many of the diseases prevalent among the North American Indians. For a considerable period Dr Stratton held the post of surgeon to the Chippawa Indians of Lake Huron. The diseases, with the exact number of cases treated, and, in one instance, the number of deaths, and their causes, are placed in the form of tables. Dr Stratton suggests that if each of the four surgeons employed in the Indian department sent to the head office in Montreal yearly returns of births and sexes, deaths, ages, and causes of death, diseases and results, and also the total number of the Indian population — that such reports would form a very interesting contribution to medical and national statistics. On a general view of these tables, by far the largest number of cases is found classified under the head of fever; this again being subdivided into intermittent, bilious, intermittent and remittent fevers. At the conclusion of one table an important observation is made in regard to these fevers, that none of them were attributable to malaria. The deaths are more numerous from fevers than from any other cause. Of other febrile diseases, scarlatina, measles, and erysipelas, are mentioned, and under them a considerable number of cases classed. In regard to the former of these, the author remarks, that the Indians were less susceptible of an attack than the whites; further, that scarlatina appeared much less severe among them, and was much less frequently followed by glandular swellings and dropsy. Of affections of the chest there are recorded —bronchitis, pleuritis, pneumonia, and phthisis. The above affections, together with diarrhœa and dysentery, include by far the greater proportion of the cases recorded. Under the denomination of peculiar ulceration of various parts of the body, are given several cases. These ulcerations, says the author, are the remains of a disease resembling the yaws of West Indies, and the sibbens of Scotland. From their having prevailed more among the Ottawas than any of the other tribes, Dr Stratton has named the disease, of which they are the most prominent feature, the Ottawa disease. The Indians themselves have no distinct name for it. The disease is stated to have made its first appearance among the Indians round Lake Huron, in 1740 or 1760, and tradition says, its first subject was a woman, from whom it was observed to spread.

The leading symptoms of the disease are langour and lassitude; dull, almost constant pain in the orbits, and in the upper part of the nose, ulceration of the nostrils and soft palate, sometimes destruction of the hard palate, or bad odour from the nostrils, and pains in the bones. Small ulcers form in the groin, on the inside of the thighs, and at times on the arms. A thick crust, when removed, discloses an indolent-looking scooped-out ulcer of no uniform size. Sometimes an eruption appears in the groins and on the inside of the thighs, and, in some cases, a peculiar, scrofulous looking superficial ulceration exists over the axillæ, groins, thighs, or arms. No eruption about the mouth has been observed, no destruction of any bone except the palate; the genital organs are never affected. It prevails more among females than males. No doubt seems to exist as to the contagious nature of the disease. The Ottawa disease has not been seen in the whites. The Indians call this affection and syphilis twins. When the disease first made its appearance, it was frequently fatal, it is now milder, and admits of a favourable prognosis. Treatment required consists in good diet; citrine ointment to the nasal and palatine ulcers, a mild course of mercury, or the application of the nitrate of silver to the sores, and the internal administration of iodine, or the hydriodate of potass.

Two other affections peculiar to the inhabitants of these regions are mentioned. The mal-de-racquette or snow-shoe evil, a painful affection of the instep in persons unaccustomed to snow shoes, and after their first wearing them for a few days. Snow ophthalmia is also apt to come on, in walking over ice and snow; the Indians, to guard against this affection, wear veils. Smallpox, when first appearing among the Indians, was very fatal, carrying off whole bands and tribes. They appear to suffer as much as the whites from ague and remittent fever. Dr Stratton never saw goitre among them, although prevailing among other races in the neighbourhood. Accidents and operations, owing to a less susceptibility of constitutional disturbance, are better borne than by Europeans. Among the Indians there is seldom seen any congenital bodily deformity, and they are much less subject to mental diseases than nations living in a more civilised, or artificial manner.—*Edinburgh Medical and Surgical Journal*, April, 1849.

III.—PRACTICE OF SURGERY.

184.—*Volvulus cured by Gastrotomy.* By M. Reali.—Luigi Stella, well formed and strongly made, 30 years of age, ate one evening a number of cherries, stones included; next morning he was obliged to lift heavy weights (for a long time he had had an inguinal hernia, which he kept up in the worst way possible). Owing to these efforts, he felt severe pain in the lower part of the right side of the abdomen, which soon spread all over it. He was sent to the hospital of Orvieto immediately, when M. Reali found the hernia not strangulated, but a tumour about the size of a hen's egg in the right iliac region. There was as yet no stercoraceous vomiting or absolute constipation, but M. R. suspected a volvulus. The patient had again two small stools, but after that, notwithstanding the use of most powerful medicine, no alvine evacuation occurred for five days. He vomited muco-bilious matter and lumbrici; the torturing pain continued, perspiration clammy, prostration great, pulse small and cord-like. At last stercoraceous vomiting ensued, which determined M. Reali to perform gastrotomy. Ether was administered, and an incision was made along the linea alba, four inches in length, from an inch below the umbilicus to near the pubis. The coverings were successively divided with care, and the peritoneum opened. The intestines, enormously distended, were pushed to the left side. The tumour was at the termination of the ileum, near the cœcum. On account of peritoneal attachments, it could not be brought to the external wound. The strangulation deserved the name of Solomon's knot, (? from the wisdom required to undo it, or from Solomon's proposed method of settling the knotty question of the dead and living children) for a knuckle of ileum, an inch and a half long, containing a cherry stone, was circularly embraced by another in such a manner, that at whatever extremity you pushed, you could not undo the knot, although you could relax it. Not being able to undo it, the operator proceeded to cut it (Solomon II.), he made three incisions in the intestinal ring, the reduction was then made, and the incisions closed by enteroraphé, and the intestine replaced. The operation lasted eleven minutes. The external wound was brought together by

the twisted suture, and a uniting bandage. Ice was kept on the abdomen for several days, and the patient had doses of castor oil and oil of bitter almonds. After the first day, flatus escaped per anum, and the next day solid feculent matter, with a number of cherry stones. The fever present at the commencement rendered bleeding necessary; it lasted for ten days, with symptoms of acute entero-peritonitis. The circumference of the wound soon became gangrenous; this spread a good way; sloughs of cellular tissue, with portions of peritoneum, came away; there was also discharge of feculent matter by the wound. But, notwithstanding these complications, and an error in regard to his diet at a later period, the patient was cured at the end of four-and-a-half months.—*Gazette des Hôpitaux*, Feb. 17, 1849.

185.—*New Instrument for the Treatment of Strictures of the Urethra.* By M. RIGAUD.—At a meeting of the Académie de Médicine, on the 23d January, M. Honore, in the name of M. Rigaud, Professor to the Faculty at Strasbourg, read a paper on a new instrument for the treatment of stricture of the urethra. The author believes that by the aid of this instrument, the solution of the problem of dilatation is completely determined, a solution consisting, according to him, in constructing a catheter of very small diameter, which could, when once introduced into the canal, be dilated uniformly, gradually, regularly, equally, in its whole length. The paper, and instrument accompanying it, were returned to be examined by MM. Segalas and Huguier.—*Gazette Médicale de Paris*, Jan. 27, 1849.

186.—*Treatment of Varix by Galvano-Puncture.* By M. CAPELLATI.—M. Capellati states, that the application of the galvano-puncture to the treatment of varix of the lower extremities, constitutes a means both very prompt and without danger to the patient, which gives it a great advantage over all other methods, as ligature, incision, excision, cauterisation, &c. The galvano-puncture, he adds, acts in two different ways, by causing the approximation of the venous parietes, and consecutively the coagulation of the blood there enclosed. It may be repeated several times without inconvenience. As might be expected, it is of no avail for varix arising from disorder of the abdominal viscera, giving rise to the disease of the vena portæ. The cure of varix by galvano-puncture, as by all other methods, depends on the cure of the disease which causes it or pre-disposes to it; after the cure of the varix it is advisable for the patient to wear a laced stocking for some months, to prevent engorgement of the venous system of the affected limb. M. Capellati adds, that he believes that the galvano-puncture will be found of very great use in the treatment of varicocele and hemorrhoids; which is partly confirmed as far as regards varicocele, by an observation of Dr Gamharini.—*Archives Générales de Médecine*, October, 1848.

187.—*On the Operation for Tying the Subclavian Artery Internal to the Scaleni Muscles.* By Dr HARGRAVE.—Dr Hargrave, after stating the general causes of failure in ligature of the subclavian in the first part of its course, says—"It has been proposed, to facilitate the operation for securing the vessel in question, "to saw the clavicle," which would certainly afford more space for the subsequent dissections; this suggestion is borne out by performing the operation on the dead body: Cruveilhier has also advocated such a practice.

It is this step in the operation which I would again propose, not so much for the facile exposing of the artery, but to allow it to be gently relaxed, after having been secured; the section of the clavicle would allow this to be done by permitting the approximation of the shoulder to the trunk, and so remove any strain or tension that the ligature might cause on the vessel; it would also remain more imbedded in the surrounding cellular membrane, and receive its supply of blood more freely to assist in the sanatory processes consequent on the operation; while the movements of the upper extremity would produce but little, if any, disturbing effects upon the artery.

The mode of conducting the operation I propose, would be, after the vessel was exposed and encircled in the ligature, carefully to saw through the clavicle about its middle, having previously guarded the subjacent parts with a spatula. If any alterations followed this step in the relations of the artery, they would be of little consequence, it being noosed prior to the section of the bone; no delay or hindrance would then prevent the tying of the artery. The action of the muscles which draw the shoulder to the trunk, as the subclavius and pectoralis minor, should then be aided by position, and the arm retained *in situ* by a bandage."—*Dub. Quar. Jour.*, Feb. 1849.

188.—*Cases of Fæcal Abscess.*—By JOHN THURNAM, M.D.—After noticing the Memoirs by Dr Barne, in the 20th and 22d volumes of the Medico-Chirurgical Trans-

sections, and to Dr Battersby's Report in the Dublin Journal for May 1847, the author gives two cases, which appear to throw some light both on the pathology and the treatment of the disease.

Case I.—A clergyman, æt. fifty-six, and suffering from mental aberration, had long been the subject of what was regarded as an incipient inguinal hernia on the right side, for which he wore a truss. On the 20th of January he complained of much swelling, and a tumour as large as an egg was found in the situation of the external abdominal ring, which was supposed to consist of omentum, and defied all efforts to return it. The patient recollected that, some days previously, he had experienced a sensation of "something giving way in that situation." The tumour was very closely connected with the front of the spermatic cord; it had a pyramidal form, and was evidently situated beneath the spermatic fascia. There were no symptoms of intestinal obstruction, nor yet of constitutional disturbance. There had been an evacuation from the bowels within twenty-four hours. The tongue was clean, and the pulse not accelerated. The tumour, however, increased in size, and was the seat of some dull pain. Calomel, followed by castor oil, was given, and leeches and hot fomentations applied. On the fourteenth day it had so much increased as to distend nearly the whole of the right side of the scrotum, encroaching on the testicles, and giving rise to some little serous effusion into the tunica vaginalis. The pain became more severe. On the twentieth day, the tumour was nearly as large as the two fists, and something like softening was detected at the lower and anterior parts. There had been a distinct rigor a day or two previously, and the pain was of a more severe, burning character. On the twenty-fourth, the pain had still increased; and, as fluctuation was detected, a seton-lancet was introduced, and somewhat less than half an ounce of a dirty, olive-coloured, semi-purulent fœcal matter escaped, mixed with, and followed by, a few bubbles of gas. A pledget of lint was introduced, and poulticing was continued. Great relief was afforded; and about half an ounce of matter was discharged daily, which gradually became less offensive. The patient's strength was kept up by more generous diet, and bark with sulphuric acid; and the bowels were opened by castor oil. At the end of a week it was found, that while the discharge of matter had much diminished, a second little abscess was forming below the former one; this also was opened, and yielded about three drachms of serous pus. About a month afterwards the sinus left by the second abscess was laid open, and on the lint with which the wound was dressed, there was found a small triangular bit of bone, with sharp angles, and not measuring more than a quarter of an inch in any direction—the fragment, probably, of a mutton chop. After this there was no more pain, the suppurations entirely subsided, and in ten days from the discharge of the bone, the tumours entirely disappeared, the whole duration of the case being ten weeks. In the course of a few weeks his general health was as good as ever.

The author concluded, that the mucous membrane of the cœcum was predisposed to disease by the habitual constipation to which the patient was subject; that ulceration of the mucous membrane of the bowel, or of its vermiform appendix, was thus produced; that this had terminated in perforation of the bowel, and in the escape of some of its contents into the surrounding cellular tissue; and that these latter had in their turn given rise to the inflammation and abscess which were the subject of treatment. This case confirms the importance of opening the abscess as soon as fluctuation can be detected, and thus preventing the formation of sloughs, which so frequently prove fatal in cases of fæcal abscess. The patient died shortly afterwards from a distinct cause, and the dissection showed the general accuracy of the above view.

Case II.—An unmarried female, æt. sixty-eight, who had spent more than half her life at the Retreat, and was distinguished by a pale, wax-like complexion, flabby muscles, and feeble gait, and had been imbecile for several years, was observed, on the 13th of January, to be paler than usual, and very fretful. On examination, there was a fulness on the right side of the abdomen, and tenderness on pressure. The tongue was moist and white; the bowels confined, and the stools dark and offensive. Leeches were applied, and appropriate remedies exhibited; and although deep-seated hardness was still to be detected, she on the 18th left her bed, and on the 24th, though more feeble than before the attack, discontinued her medicine. She remained apparently well till the 6th of February, when a circumscribed tumour, the size of an orange, was detected immediately below the umbilicus. It was firm, dull on percussion, and could be handled without occasioning pain. We need not describe the local and general treatment; it is sufficient to observe

that on the 12th it had attained to twice its former bulk, was of a blueish-red colour, and some indications of fluctuation, combined with an emphysematous crepitation, were communicated to the fingers. The tongue was dry, and covered with a yellow fur; the bowels free; there was slight nocturnal perspiration, but no sickness or rigor. There was no difficulty in deciding that the case was one of fæcal abscess, communicating with the large intestine, and probably containing gas.

The above symptoms were more marked on the following day (the 13th), and the tumour was punctured. About an ounce and a half of dark purulent matter escaped, having a strong fæcal odour, and mixed with gas. No communication with the intestine could be detected with a probe. Under the use of beef-tea and wine, we found that by the end of February the cavity of the abscess was filled up, leaving only a small fistulous opening in the centre of a depressed and puckered cicatrix. By the end of March this opening closed, and she was well enough to return to her ordinary mode of living. On the 7th of April, however, the cicatrix gave way, and purulent matter, mixed with gas, escaped. From this time until her death, on the 12th of June, a few drops of pus were discharged daily; her emaciation became extreme; œdema, commencing in the ankle, extended up the right leg to the thigh; the tongue became brown and dry; respiration became short and impeded; and during the two last days, there was a suppression of urine.

On examination it was found, that in the middle of the transverse arch of the colon, to the extent of two or three inches, the muscular tissue of the bowel was the seat of scirrhous degeneration and hypertrophy. The mucous membrane, to the same extent, was replaced by a soft cancer, which in some places was softened, broken down, and ulcerated. The fungous growth blocked up the intestine in such a way, that the little finger could barely be passed through it. At the bottom of the ulcerated surface there was a small opening, by which a probe could be passed through a mass of sloughy and suppurating tissues, through some old adhesions into the cavity of the abscess, and so through the external fistulous opening. In the upper and left part of the cœcum were two small orifices, about half an inch apart, with elevated thickened borders, through each of which a probe could be passed into the external fistulous opening. The mucous membrane covering the fistulous orifices in the cœcum, was rather short and red, but otherwise the cœcum and vermiform appendage were healthy.

From these two cases it appears, that the presence of gaseous matters in the contents of the abscess, and the consequent sense of crepitation communicated to the fingers before the abscess is opened, and the presence of bubbles of air in the discharged matter, are the most important symptoms. When the abscess is dependent, as in the second case, upon malignant disease (which, however, is a very rare cause), cancer-cells might possibly be found in the discharged matter.—*Prov. Med. and Surg. Journal*, September 1848.

189.—*Inguinal Tumour. — Cancerous Testicle.* Professor VELPEAU.—Professor Velpeau mentions a case that had come under his care at La Charité, where the patient had a tumour in the inguinal region, evidently of a cancerous nature. He had only one testicle (the right) down in his scrotum. M. Velpeau thought this tumour was the left testicle, which turned out afterwards to be the case. This is the first instance that M. Velpeau has seen, where the testicle was cancerous without being down in the scrotum.—*Gazette des Hôpitaux*, Jan. 6, 1849.

190.—*Tumour at the Elbow.*—The following case occurred in the practice of M. Velpeau, and is narrated by M. H. Blot:—

The patient, a young man, æt. twenty-two, was admitted into the hospital of la Charité, on the 5th July. About four years previously, without any known cause, a small tumour, of the size of a hazel nut, appeared at the bend of the left elbow. Since then it had gradually increased, until now it was almost as large as a fist. It was of an elastic consistence, not adherent to the surrounding tissues, and was the seat of occasional severe pain. The patient had never been bled from that arm. No pulsation nor any bruit could be detected in the tumour, nor was its size diminished by pressure upon the humeral artery, but towards its centre indistinct fluctuation could be felt. July 6.—A small trochar having been introduced into the tumour, about two ounces of blood escaped. On the instrument being removed, the tumour, which had become soft and somewhat shrunk, immediately regained its former size and consistence. July 7th.—On examination feeble pulsation was now perceived in the tumour, and its size could be partially reduced by pressure.

Pressure upon the humeral artery, and afterwards over the tumour, were employed, without producing any marked effect. Ligature of the artery was then performed; this caused a temporary cessation of the pulsation, and decrease in the size of the tumour. September 10.—The tumour having regained all its former characters, M. Velpeau next employed acupuncture, the only effect of which was to cause subcutaneous suppuration. October 23.—An incision was made through the whole length of the tumour, and it being found impossible to secure the bleeding points, the wound was filled with pledgets of lint. During this operation, the patient lost a very large quantity of blood. On the 28th, symptoms of tetanus appeared; and he died upon the 3rd November.

On examination the tumour was found to consist of a mass of unorganized fibrine, mixed with blood globules, showing its origin to have been a simple effusion of blood. The median vein passed in front of the tumour, and was not in any way connected with it; but behind, at the place where the artery was in contact with the tumour, a small fissure was discovered in it, through which the head of a large pin could be passed, and from which the injection which had been thrown into the artery had escaped into the tumour. The humeral artery was impervious for half an inch below where the ligature had been applied, but lower down was of its natural size. The articular branches at the elbow were very much enlarged.—*L'Union Médicale*, Jan. 2 and 4, 1849.

191.—*Tumours over the Knee-Joint.* By M. A. Bernard.—M. A. Bernard states, that a tumour in front of the patella, exactly resembling the disease here called housemaid's-knee, is of frequent occurrence among *religieuses*. Puncture and injection with iodine, when the tumour is large and soft, and extirpation when it is small and less fluid, constitute the treatment usually adopted by him. The method found so successful in this country of puncturing, and then applying a blister over the tumour, does not appear to be in use in the Parisian hospitals.—*Gaz. des Hôp.*, Jan. 25, 1849.

IV.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

192.—*Death of the Princess Charlotte.* By Dr Sims.—The following is a letter concerning this case addressed to Dr Clarke of Dublin, by Dr Sims, one of the consulting physicians in attendance.

"London, November 15, 1817.

"My Dear Sir,—I do not wonder at your wishing to have a correct statement of the labour of Her Royal Highness Princess Charlotte, the fatal issue of which has involved the whole nation in distress. You must excuse my being very concise, as I have been, and am very much hurried. I take the opportunity of writing this in a lying-in chamber.

"Her Royal Highness's labour commenced by the discharge of the liquor amnii about seven o'clock on Monday morning, and pains followed soon after; they continued through the night and a great part of the next day, sharp, short, but very ineffectual. Towards the evening Sir Richard Croft began to suspect that the labour might not terminate without artificial assistance, and a message was dispatched for me. I arrived at two on Wednesday morning. The labour was now advancing more favourably, and both Doctor Baillie and myself concurred in the opinion that it would not be advisable to inform Her Royal Highness of my arrival. From this time to the end of the labour, the progress was uniform, though very slow, the patient in good spirits, pulse calm, and there never was room to entertain a question about the use of instruments. About six in the afternoon the discharges became of a green colour which led to a suspicion that the child might be dead; still the giving assistance was quite out of the question, as the pains now became more effectual, and the labour proceeded regularly though slowly. The child was born, without artificial assistance, at nine o'clock in the evening. Attempts were for a good while made to reanimate it by inflating the lungs, friction, hot baths, &c., but without effect; the heart could not be made to beat even once. Soon after the delivery Sir Richard Croft discovered that the uterus was contracted in the middle, in the hour-glass form, and, as some hemorrhage commenced, it was agreed that the placenta should be brought away by introducing the hand. This was done about half an hour after the delivery of the child, with more ease and less loss of blood than usual. Her Royal Highness continued well for about two hours; she then complained of being sick at stomach, and of noise in her ears; began to be talkative,

and her pulse became frequent, but I understand she was very quiet after this, and her pulse calm. About half-past twelve o'clock she complained of severe pain at her chest, became extremely restless, with a rapid, irregular, and weak pulse. At this time I saw her for the first time, and saw immediately that she must die. It has been said that we were all gone to bed, but that is not a fact. Croft did not leave the room, Dr Baillie retired about eleven, and I went to my bed-chamber and laid down in my clothes at twelve. By dissection, some bloody fluid (two ounces) was found in the pericardium, supposed to be thrown out in articulo mortis. The brain and other organs all sound except the right ovarium, which was distended into a cyst, the size of a hen's egg; the hour-glass contraction of the uterus still visible; a considerable quantity of blood in the cavity of the uterus, but those present differ about the quantity, so much as from twelve ounces to pound and a half; the uterus extended as high as the navel. The cause of Her Royal Highness's death is certainly somewhat obscure; the symptoms were such as attend death from hemorrhage; but the loss of blood did not appear to be sufficient to account for a fatal issue. It is possible that the effusion into the pericardium took place earlier than what was supposed, and it does not seem to me to be quite certain that this might not be the cause. As far as I can judge, the labour could not have been better managed. That I did not see Her Royal Highness more early was awkward; and it would have been better that I should have been introduced before the labour was expected; and it should have been understood that when the labour came on I should be sent to without waiting to know whether a consultation was necessary or not. I thought so at the time, but I could not propose such an arrangement to Croft. But this is entirely *entre nous*.

"I am glad to hear that your son is well, and, with all family, wish to be remembered to him; we are happy to hear that he was agreeably married.—I remain, my dear Doctor, ever yours most truly,

"JNO. SIMS."

"P.S.—This letter is confidential, as, perhaps, I might be blamed for writing any particulars without the permission of Prince Leopold."—*Life and Writings of Dr Joseph Clarke. By Dr Collins*, p. 68.

193.—*Four Cases of Extraction of Placenta before the Fœtus in Unavoidable Hemorrhage.* By DRS WALLER and PECK.—Dr Waller's case, although it terminated fatally, confirms the opinion that perfect detachment of the placenta has the effect of arresting, instead of increasing, hemorrhage; at any rate, it adds one more to the many cases already recorded by various obstetricians, which prove most satisfactorily, that the entire removal of this organ (the after-birth), does not, as was formerly supposed, necessarily involve as its consequence an increase of the bleeding.

When Dr Waller visited his patient along with Dr Brydges, he found her lying in a fearful condition—her countenance ghastly, extremities of a marble coldness, and no distinguishable pulsation in the radial arteries. Fearing the after-effects of turning and delivering in such a state of matters, Dr Waller decided on removing the placenta, which was easily effected. As much nourishment and stimulants were administered as her stomach would carry, and in about ten hours afterwards she was artificially delivered, as the continuance of labour was again bringing on the symptoms of excessive prostration, from which she suffered before the separation of the placenta.—*Med. Times*, April 14, 1849.

Dr Peck was summoned to Mrs Rush, in labour for the third time. She was of leucophlegmatic temperament, and naturally delicate. There had been so much hemorrhage that she was nearly exhausted. On examination, he detected a globular, softish, spongy mass immediately over the os uteri, which was flabby, and sufficiently dilated to introduce four fingers. A pain came on, and with it a fearful gush of hemorrhage. Dr P. was now certain that it was a case of placental presentation. Perceiving that the woman was getting weaker, he determined immediately to remove the placenta, directing immediately the administration of some brandy and water, and a full dose of ergot. He then introduced his hand, carefully peeling the placenta from its attachment to the uterus, removed it, and divided the funis. Immediately the hemorrhage ceased. Uterine action not coming on for some time, he repeated the secale, occasionally passing his finger around the inner surface of the os uteri, and shortly his patient rallied. In about four hours the fœtus was naturally expelled. The woman, he remarks, is doing well.

Dr Peck has pursued this plan in two other cases, with the same advantage to the mothers as in the above case, and in one of the cases the child was saved.—*Prov. Med. and Surg. Journal*, April 4, 1849.

194.—*Preternatural Presentation repeated in Five Successive Pregnancies.* By Madame Renard.—Madame R. remarks, that it is well known that if a preternatural presentation occur once, it is very probable that it will occur again in the next pregnancy. M. Walther has recorded a case where the shoulder presented in six successive pregnancies, in consequence of a malformation of the uterus. In the case which she details, and in which she has now delivered for the fifth time, she has always found the shoulder presenting. The cause of this, in Madame R.'s case, is a malformation of the pelvis of the woman.—*Gaz. des Hôpitaux*, Mars 20, 1849.

[Drs Denman, Lee, Collins, &c., have recorded similar cases. The last author mentions a case where preternatural presentation occurred in nine successive pregnancies. In an article to be speedily published, Dr Simpson has classified these cases, and demonstrated the theory of their recurrence.]

195.—*Puerperal Tetanus.* By Dr Piter-Aubinais.—There exists a traumatic puerperal affection distinct from what is ordinarily called puerperal eclampsia. It is characterised by clenching of the jaws (trismus), difficulty or utter incapability of swallowing, contraction or convulsive tension of certain of the muscles, and sometimes of all the voluntary muscles together. This rare affection it is proposed to call puerperal tetanus. It comes on spontaneously, generally soon after the supervention of the milk flow, and in woman who ought not to nurse. M. Aubinais has observed it only in women in the country, and where the lochiæ as well as the cutaneous transpiration, have been arrested by the sudden influence of cold and damps—as by plunging the feet into cold water, walking barefoot on damp ground, or swallowing at once a large quantity of cold water.

Of three cases which M. Aubinais has seen, the affection proved fatal in one. The treatment resorted to, consisted in the use of antiphlogistic remedies and narcotics. In one of the cases, where the woman appeared to be under the influence of the poison of ague, quinine was exhibited with advantage.—*Journal de la Société de Médécine de la Loire-Inferieure; and Bulletin de Therap.* 15 Avril 1849.

196.—*Urethritis in the Female.* By Dr M'Clintock.—Dr M. detailed the histories of two cases of urethritis in females. One of these patients was a lady in the fourth month of her twelfth pregnancy, who had been suffering from this affection of the urethra for two months, and had tried a variety of means for its removal, prior to his seeing her. The other patient was a poor countrywoman, who had given birth to five children, three of whom were removed by craniotomy, in consequence of a large osteo-sarcomatous tumour within the pelvis. The symptoms in both cases were nearly identical, and were as follows:—Intense burning pain during each act of micturition, accompanied with much straining and bearing down. There was no discharge from the vagina, nor any evidence of disease of this canal or of the uterus. The urine of each, examined in the ordinary way, seemed healthy and free from albumen. Looking at the meatus urinarius, the mucous membrane of the canal was seen to be in a highly vascular and swollen condition, so as to form a considerable tumour at the orifice. This, when touched, was exquisitely sensitive. Having satisfied himself as to the pathological state of the parts, he commenced the treatment. In the first case, he began by trying astringent local applications, such as alum, zinc, and lead washes; and these failing to produce any beneficial effect, anodyne lotions of various kinds were next used, but with no better result; lastly, he applied directly to the part a strong solution of lunar caustic, but neither did this bring about any improvement in her condition. It then occurred to Dr M'Clintock to make trial of copaiba, which we know exercises a very marked influence upon the mucous membranes generally. He accordingly commenced with three capsules of the balsam in the day, and increased the number to four per diem. This treatment at once produced the most decided improvement; so that after she had taken eighteen capsules, she was entirely freed from her torturing complaint.

In the second case, the complaint was of six week's standing, and without waiting to try the effects of any other remedies, he at once commenced the use of copaiba capsules in the manner just described, and with a like satisfactory result, as a perfect cure was established before she had finished the box. A subsequent examination of the urethra, showed that it had re-acquired its natural healthy characters. In commenting upon these cases, Dr M'Clintock very clearly pointed out how they differed in their symptoms and pathological nature, from gonnorrhœa, from vascular tumour of the meatus urinarius, and from thickening of the cellular tissue surrounding the urethra,—a disease first described by Sir C. M. Clarke. Lastly, he alluded to Dr Ashwell's chapter on

"Chronic Urethritis," in the last edition of his treatise on female complaints, which is the first work containing a description of it. The extremely incontrollable nature of the disease described by Dr Ashwell, which almost set any treatment at defiance, inclined Dr M'Clintock to entertain suspicions as to whether the cases he met with could have been of the same nature as his; and yet that they really were instances of inflammation of the urethra, he established beyond any manner of doubt. In order to reconcile these conflicting results, he could only suppose that the form of the complaint seen by him was of a milder and more tractable nature than had come under Dr Ashwell's care; or else that the inflammation had been limited to a part of the canal only.

Up to the present time, both the above patients have continued in excellent health, and had no return of their truly painful malady.—*Med. Times*, March 10, 1849.

197.—*The Absence of Urea in the Liquor Amnii and Fœtal Urine.* By Dr A. H. M'Clintock.—Dr M'Clintock was led to the present investigation by the examination of a fœtus born at the full time, and which had died immediately after its birth. The vesical extremities of both the ureters were imperforate, and the ureter on the right side was so dilated as to contain not less than a pint and a half of urine. This case, though not unique, shows (in opposition to the generally received opinion) that the secretion of urine is already commenced before the birth of the infant. Similar cases are described by Dr Lee, Dr Fearns, and Dr Montgomery.

The researches and experiments of Drs Prout and Bostock, of Frommhertz and Gugert, and of Dr Rees, would lead us to believe, that in some cases a small quantity of urea is, sometimes at least, contained in the liquor amnii. But this evidence is more than counterbalanced by the researches of Berzelius, Raspail, Mack, Colberg, Veigt, Prout, Lassaigne, and Moore, all of whom agree in thinking that no urea is normally contained in the liquor amnii.

Here, then, are two classes of facts, seemingly in opposition to one another; viz. first, the undoubted proofs of urine being secreted by the fœtus in considerable quantity before birth; and secondly, the complete absence of urea in the majority of instances where the liquor amnii was subjected to accurate chemical analysis. In order to reconcile these discordant conclusions, it becomes an object of the utmost importance to ascertain the composition of the fœtal urine, as hitherto observers appeared to have taken it for granted, that the renal secretion possessed the same chemical characters during intra-uterine life, as it does after birth.

Further experiments by Dr Moore seem to justify the conclusion, that the urine of the child before birth differs in its chemical constitution from that secreted subsequently, in two very remarkable particulars, viz. first, in containing a large quantity of albumen; and secondly, in being almost or altogether deficient in urea. Hence, none is to be looked for in the liquor amnii, although it is in all probability mixed with a large quantity of urine passed by the fœtus during its intra-uterine life.

The liquor allantoidis of some of the lower animals, the cow for example, is considered to be the urine of the fœtus; but although it has several times been the subject of chemical investigation, urea has not as yet been detected in it, and albumen has always been found present. This would seem to give additional confirmation to the results we have obtained in our examinations of the fœtal urine of the human subject. According to the views of Liebig, the peculiar substance called *allantoin* appears to replace both urea and uric acid in the urine of the fœtus of brutes; it would, therefore, be an interesting subject for further inquiry, to ascertain whether this or some analogous product be present in the urine of the human fœtus.—*Dublin Quarterly Journal*, Feb. 1849.

198.—*The Heart-Clot.* By Dr Meigs.—I believe it is a fact, says Dr Meigs, not to be controverted, that in an animal slowly bled to death, the first portions of blood extravasated coagulate less readily than the last portions. If this doctrine is true, it follows that the coagulability of the blood left in the vessels after great hemorrhages is augmented: I have had several occasions to find that it is dangerously augmented. To take one of the most ordinary cases of hemorrhage,—I mean that occurring after labour, or in abortions,—we have an instance in which, even after the arrest of the bleeding, the patient is exposed to mishap from the coagulability of the blood remaining in the vessels. Loss of blood produces a tendency to fainting or lipothymia. During an attack of fainting, the motions of the heart are enfeebled; the blood moves languidly in both the venæ cavæ, pours itself out in a slow current into the auricle, which it sluggishly distends, and sometimes is then instantly converted into a

solid clot. If a clot be formed in the right auricle, it will also be formed in the *iter ad ventriculum dextrum*, filling up the cone of the tricuspid valve; and the nucleus of it will cause the coagulum at length to occupy the cavity of the right ventricle, and extend itself to a greater or less distance along the tract of the pulmonary artery. If the whole pulmonic side of the heart should be perfectly occupied in this way, the death of the individual would be instantaneous; and I doubt not, that many of the examples of sudden death, after delivery in hemorrhage labours, are produced by the formation of cardio-morphous coagula which form in the instant of a state of fainting or lipothymia.

I may assert the opinion here, that fainting is oligæmia of the encephalon, and that a hyperæmia of the encephalic bulbs is the very converse of, and absolutely incompatible with, the state of swooning. To raise up a woman who has within the few days past lost a considerable quantity of blood is almost inevitably to bring on deliquium. Now, if the idea be just, that hemorrhage renders the remaining blood more coagulable, then it follows, that to take the woman out of bed, or to let her sit up in bed, is to expose her to the hazard of forming a coagulum in the right auricle, which, by extension of the nucleus, may fill the ventricle, occupy the aperture of the tricuspid, and pass several inches upwards in the course of the pulmonary artery and its branches. Monthly nurses, and the ordinary attendants of the sick, know nothing of these things, and they hesitate not, oftimes, to exhort or to permit the anæmical accouchée to rise and sit for a few moments for purposes that might be answered without quitting the horizontal position.

The time required for extinguishing the life of the sufferer is a variable time; one relative to the magnitude and extent of the coagulation. One of my patients, says Dr Meigs, lived forty-eight hours after the occurrence of the accident, during which time she suffered the most inexpressible respiratory distress. She filled her pericardium with serum, while her peritoneal cavity became also the subject of a great effusion. Upon examining the heart twenty-four hours after her decease, one might feel surprised that her life could be so long protracted, since the auricle, tricuspid, and ventricle were completely tamponed with a clot which was not an enthanasial clot, but consisted apparently of a firm, whitish-yellow mass of fibrine, out of which every particle of hæmatoglobulin had been washed away, or expressed. An enthanasial clot is, in my opinion, necessarily a red one; a pre-enthanasial one ought to be white.

To enter an apartment one has quitted only half an hour before, and to find a patient hopelessly ill with signs of imminent death, yet who had no serious symptoms of illness before—to find her making desperate voluntary efforts to breathe, without any signs of laryngeal, or phrenic, or pulmonic inflammation, or accident—to see the face pale and ghastly—to observe her conscious sense of impending asphyxiation from loss of oxygen—without the leaden or iodic hue of a general cyanosis — These are the grounds of a diagnosis which may be called transcendental, one in which the consciousness of the physician informs him that a mechanical obstruction within the heart exists, and that such an obstruction alone can give rise to the phenomena.

In all the lingering or sudden progressions of the accidental disorders supervening in endo-cardial coagulum, no purely cyanotic manifestations have met my observation.—*Philadelphia Medical Examiner, March* 1849.

[We have given the more important points of Professor Meigs' paper at some length, conceiving that the practical recommendation of so eminent an obstetrician must be looked upon as of the greatest value; nor do we suppose there is any obstetric practitioner of experience who cannot bear out his testimony in regard to the danger of sudden death in labour, from incautiously allowing a bloodless patient to assume the erect posture. We must, however, demur to the pathological speculations which he has interwoven with his paper, as being in most cases more than doubtful, and in some quite indefensible. We are not disposed to deny that clots may sometimes be formed before the heart has altogether ceased to beat; but we think the opinion that this is a common cause of death in labour, would require far more precise evidence, and a less "transcendental" diagnosis than that before us. The opinion that a white clot is necessarily formed before death, and a red one after death, cannot be for a moment maintained, if it be considered that the greater part of the colourless clots found in the vessels after death, are either colourless on their anterior, and coloured on their posterior surface, or colourless within the right ventricle, and coloured where they pass into the pulmonary artery. They often pre-

sent, too, casts of the valves of the pulmonary artery, such as to preclude absolutely the idea of their having been formed while the blood was in motion. We think it must be quite plain to most persons in the habit of seeing these clots, that they are, for the most part, formed in the same way as the buffy coat of the blood out of the body—*i. e.*, by subsidence of the blood corpuscles before coagulation has taken place; the extremely slow coagulation of the blood within the vessels after death favouring this process, in the same way as any of the numerous agents retarding coagulation favour the occurrence of the buffy coat.] W. T. G.

V.—MATERIA MEDICA AND THERAPEUTICS.

199.—*On the Employment of Nitrate of Silver as a Vesicant.* By M. DELVAUX.—The general action of nitrate of silver on the tissues seems to be to separate the hydrogen. When this salt is brought in contact with an organic body, it becomes decomposed into nitric acid, oxygen, and metallic silver in a molecular state. Silver is deposited, and this imparts to the tissue its coloration, whilst the oxygen of the oxide of silver and of the decomposed nitric acid takes up the hydrogen to form water.

When nitrate of silver is brought in contact with the skin, the effect produced varies according to the greater or smaller quantity of the salt employed. If the quantity be small it merely acts on the epidermic cells, which it disorganises. Metallic silver is reduced to a molecular state, and combines with their elements; the epidermic tissue assumes a blackish brown coloration, owing to the metallic silver itself, and after a time the tissue is detached and drops. Where the action of the nitrate of silver is continued for a longer period of time, the true skin itself becomes affected, the effect produced varying according to whether the disorganisation is merely on the surface or more deeply seated. In the former case, an abundant serosity raises the altered epidermic surface, and produces *vesication*. In the latter, the true skin being disorganised in its thickness, produces an eschar.

If now, we consider that the skin varies in thickness and sensibility in different parts of the body, and according to age, sex, &c., it will be evident that a certain tact is required to regulate the quantity of nitrate of silver necessary to disorganise the epidermic layers, and procure a vesicatory effect without disorganising the true skin. The principles by which the employment of escharotics in general is guided will suffice to prevent the occurrence of any unexpected results.

Without proceeding to enumerate all the diseases in which vesication by means of nitrate of silver may produce beneficial therapeutic effects, we will adduce a few cases in refutation of the objections that might be advanced against this form of application.

1. M. Claes, a patient in the hospital of des Vieillards, who was recovering from an attack of adynamic pleuro-pneumonia with parotitis. Complained on the 3d of September 1848, of severe pain in the left sub-scapular region, and in the lateral portion of the neck, along the trapezius muscle. The pains increased on the least movement. Exposure to a current of air had given origin to this rheumatic affection. The skin was cauterised in the sub-scapular region with a stick of nitrate of silver, moistened with water at the moment of its application. A bulla appeared in the course of an hour and a half; epidermis being removed, a slight degree of suppuration was established, and the pain entirely ceased as if by magic, at the end of about ten hours.

The cauterised spot had been dressed immediately after cauterisation with cold cream, and this was continued until the occurrence of cauterisation, which took place within the fourth day.

2. A man named Boufort, came to consult M. Uytterhoeven at the same hospital. The old man had suffered since the preceding evening from acute stitch in the side. The pains extended along the seventh rib towards the back. As auscultation did not reveal anything abnormal in the thoracic organs, the spot to which the patient referred the pain was cauterised with nitrate of silver, previously moistened with water. The pain disappeared as the operation advanced. A vesicle was produced in the course of an hour. A compress with cerate was applied to the wound. On the following day the pleurodynia was perfectly cured without the treatment being further continued.

3. The same method was immediately employed in the case of Marie Demaître, who had been attacked by pleurodynia in the left side of the thorax. The pain was so violent as to call forth loud cries from the patient. The cure was equally prompt and unexpected, and in the course of the

day the pain entirely disappeared. The vesication was treated in the manner usually adopted in the case of ordinary vesicants.

It only remains to add a word or two on the mode of operation of this vesicant. In order to avoid all chance of irregularity, it is necessary to rub the whole surface on which vesication is to be induced, lightly but equally with the point of the stick moistened with a drop of water, and to continue long enough until a grey coloration is produced. This effect is generally obtained in the course of a minute and a half. If a deeper action be required, owing to the thickness of the epidermis, or a more strongly marked therapeutic effect be sought, the operation must be repeated over the same surface and with the same precautions.

M. V. Uytterhoeven has always found this vesicant answer his expectations most fully, both in private practice and in the wards of the hospital des Vieillards.—*Nouvelliste Médicale Belge.*

200.—*Local Application of Nitrate of Silver in Catarrh.* By Dr Lockwood.—Dr Lockwood has found the application of a strong solution of nitrate of silver (ten grains to one ounce of water) to the Schneiderian membrane, a successful means of checking catarrh. This treatment is most effectual in the early stage of the disease, when the mucous lining of the nasal cavities is dry, tumid, and red.

The remedy is best applied with a camel's hair pencil.

The application is not painful, nor even disagreeable. Its immediate effect is to excite a copious serous effusion, which continues for some minutes. After this the nostrils are freed from the previous impediment to the passage of the breath through them, when the sensation of relief becomes at once manifest. With the subsidence of the local swelling, the general heaviness and *malaise* disappear. For some minutes, the inhalation of cold air communicates to the mucous lining of the nose a feeling of rawness. This, however, is of short duration, after which, unless the inflammation has extended beyond the Schneiderian membrane, the cure is complete.

To accomplish a radical cure, the solution should be applied at the very commencement of the attack. When the inflammation has extended to the pharynx, &c., it is no longer practicable to subject all the parts affected to local treatment. Dr L. has, however, applied the remedy in many cases where the disease had made several days' progress. Then, although no expectations were entertained of removing the symptoms of bronchial irritation which might have supervened, the relief to the head was always satisfactory, by the liberty afforded to the passage of air through the nostrils.—*American Jour. of Med. Sciences*, Jan. 1849.

201.—*Nux Vomica in Obstinate Constipation.* By M. Ossieur.—The author relates two cases of protracted constipation, in the treatment of which the nux vomica rendered important service. In the first patient, an adult female, the constipation had existed for five days, when M. Ossieur was consulted. Calomel, castor-oil, and purgative enemata were exhibited frequently, and in large doses, during four days, but without success in obtaining a feculent evacuation. She had vomited several times. Recourse was then had to the nux vomica, of which the patient was ordered twenty powders, containing each one-fifth of a grain, one of these to be taken every hour. After the fourteenth dose, she complained of borborygmi and of twisting colicky pains in the belly, which were soon followed by an evacuation of very hard stercoral matter, enveloped by mucus and some ascarides. The second patient, also a female, was seized suddenly with severe griping pains in the belly, which were soon accompanied by nausea and vomiting. These symptoms continued two days, during which period various purgative remedies were exhibited without effect. M. Ossieur, who was then called, suspected the existence of hernia, and on examination found a tense crural hernial tumour on the right side, which he reduced with difficulty. The vomiting and abdominal pains now ceased, but for three days the bowels were not opened, notwithstanding the repeated exhibition of castor-oil by the mouth, and of strong purgative enemata. M. Ossieur had recourse on this occasion, to the alkaloid strychnia, which he exhibited in powder along with sugar and calcined magnesia. A powder containing one-sixtieth of a grain of strychnia was administered every hour. After the sixth dose, the action of the drug was announced by active intestinal movements, and the bowels were freely evacuated after the seventh. Among the fecal matters expelled, there was one portion of almost stony hardness about an inch in diameter, and having the form of the intestine.—*Annales de la Soc. Méd. d'Emul. de la Flandre Occid.*, Dec. 1848, and *L'Union Méd.*, March 6, 1849.

[These cases are interesting, and the practice indicated merits a trial, but the drug may be given in much larger doses; indeed, we are surprised at the marked

effects obtained by M. Ossieur from the use of so small doses. In several cases of habitual constipation, we have exhibited strychnia, morning and evening, in doses gradually increasing from one-sixth to one-third of a grain, and in one individual this practice was completely successful. In the other cases a beneficial action was not obvious, but we have been informed of cases in the practice of other physicians where this treatment has been more fortunate. The addition of a small quantity of strychnia to an ordinary purgative pill is said to be useful, but it must be difficult to determine whether such addition be or be not beneficial. Very recently in the *L'Union Médicale* (1848, Nos. 138 and 139), M. Homolle published several interesting cases of apparent intestinal obstruction after the reduction of hernia, where good results were obtained by the use of strychnia in combination with magnesia. Whether the medicine stimulates directly the muscular coat of the intestine, or operates through the nervous system, we cannot at present determine.]

202.—*Inhalation of Medicated Powders.* —By Dr CHAMBERS.—While treating diseases in those parts of the mucous membranes which are sufficiently exposed to sight and touch, for the immediate application of remedial agents, there are few to whom the wish has not occurred that equal facilities were afforded of directly influencing the deeper-seated continuations of the same fabric. The powerful remedies which restore so rapidly to health the conjunctiva and the fauces, would probably act with equal quickness and success on the stomach or the bronchi, could we apply them rightly to the right spot, and attack the local disease without passing circuitously through the whole system. A mode I have lately adopted, Dr C. observes, of attaining this end with the most inaccessible mucous surface of all, the pulmonary, though it is clumsy and imperfect, may still be found useful in some obstinate cases where the upper part of the air-tubes are principally diseased. The plan is, the inhalation of a light innocuous powder, which may carry with it the required substance, either diffused in the air or absorbed in its pores. That which I have found well suited to the purpose is the pollen of the lycopodium, or club-moss, which has been made to imbibe as much as it would take up of a saturated solution of nitrate of silver, or of sulphate of copper, or of the two combined, and then carefully dried, and reduced again to an impalpable powder. Mr Squire has made me some, which, in two grains and a half, contains one grain of nitrate of silver, and another, which, in five grains, contains one of nitrate of silver and two of sulphate of copper.

The patient should introduce into his mouth, as far as he can without choking, a well-dried glass funnel, and draw in his breath strongly, whilst he himself, or a second party, dusts the powder in a dense cloud into the large end with a nursery puff-ball. If the dust be raised by an attendant, the patient can indicate the moment he inspires by raising his hand. To obviate the necessity for withdrawing the funnel during expiration, to prevent the dust being blown about the room, an apparatus may be used with a double valve and a closed powder-box, which allows the dust to pass inwards only; but the employment of metal makes the machine less agreeable than the more awkward but cleaner-looking and less formidable glass.

There is usually some coughing excited by the dusty vehicle, but not of such moment as to prevent the immediate repetition of the experiment. This is certainly an inconvenience, but it seems a much minor one than those which attend the introduction of a sponge into the larynx, as has been recommended. The spasm excited by this is distressing to the operator, and painful to the patient, and prevents its employment in slighter cases where the remedy appears to both as bad as the disease.—*Lancet.*

203.—*Vegetable Charcoal in Dyspepsia and Gastralgia.* By M. BELLOE.—The instinctive use made of this substance by chloretic girls long ago, suggested its therapeutic employment in certain diseases of the stomach and intestines. It has recently been neglected, and, according to M. Belloe, unjustly. He states that all charcoals are not equally useful. M. Roland preferred the charcoal of the willow, but M. Belloe has found that of the poplar most efficacious. He administers it in powder, moistened with water, in doses varying from two to six teaspoonfuls daily, taken before or immediately after meals. It frequently cures dyspepsia, gastralgia, and especially pyrosis, and when it fails promptly to remove the disease, it diminishes the irritability of the stomach, and abates pain, nausea, and vomiting. The physiological effects are, an agreeable taste in the mouth, increase of the salivary secretion, improvement of the appetite, and easy digestion. It acts feebly as a laxative. Several interesting cases are detailed to illustrate these statements.—*Journ. de Méd. de Bordeaux*, and *Bull. de Thér.*, Feb. 15, 1849.

VI.—FORENSIC MEDICINE AND TOXICOLOGY.

204.—*On Animal Charcoal as an Antidote.*—By B. Howard Rand, M.D., of Philadelphia.—In the "Transactions" of the Medical Society of London, new series, vol. i.,[1] is a paper, by Dr A. B. Garrod, detailing some experiments, in which he employed purified animal charcoal as an antidote. This is prepared from ivory black, by digesting it in dilute chlorohydric acid to remove the earthy matters, afterwards washing and heating it to redness in a covered crucible. The subjects of his experiments were dogs, rabbits, and guinea-pigs. He administered large doses of opium, belladonna, aconite, nux vomica, delphinium, stavesacre, white hellebore, and their alkaloids, as well as digitalis, hemlock, tobacco, elaterium, ipecacuanha, hydrocyanic acid, cantharides, and arsenious acid, without injurious consequences, when sufficient animal charcoal was given simultaneously with them, or in some cases before the peculiar effects of the drug were developed. It also prevented, but less completely, the action of the bichloride of mercury, and of the salts of copper and lead.

Dr Garrod concludes from his experiments:—

1st, That animal charcoal has the power of combining in the stomach with the poisonous principles of animal and vegetable substances, and that the compounds thus produced are innoxious; therefore, when given before these poisons have become absorbed, it will act as an antidote.

2d, That animal charcoal will absorb some mineral substances, and render them inert; but so large a quantity of the charcoal is required, that it is not so well adapted for many poisons of this class as their own special antidotes; the effects of arsenic, however, appear to be better combated by this than by any other article.

3d, That a certain amount of animal charcoal is required, about half an ounce to each grain of morphia, strychnia, or any other alkaloid; but, of course, much less for the substances from which they are obtained, as opium, nux vomica, &c., a scruple of nux vomica not requiring more than half an ounce of charcoal.

4th, That the antidote itself exerts no injurious action on the body.

The method of preparing pure animal charcoal from ivory black, before mentioned, is tedious and wasteful, only ten per cent. being obtained, while the amount of acid used is considerable. A very good and pure charcoal is obtained by calcining leather scraps or blood with pearl-ash, washing and re-heating in a close crucible—it was this kind of charcoal which was principally used in the experiments to be detailed. Much of the discrepancy of experimenters with this substance is undoubtedly due to their use of an impure specimen of it.

With a view of ascertaining more accurately the value of the proposed antidote, the writer performed a number of experiments, from which the following are selected as having the most direct bearing upon the subject:—

1. One grain of pure morphia was swallowed with about an ounce of pure animal charcoal, in warm water; no narcotic symptoms supervened, but there was some gastric irritation, which subsided in the course of the day.

2. One grain of sulphate of morphia was digested with pure animal charcoal until all bitterness was removed; the liquid, filtered off and swallowed, produced no effect.

3. Ten grains of extract of belladonna were swallowed with two drachms of the charcoal; there followed vertigo, dilated pupils, dimness of vision, exceeding dryness of the throat, and desire to sleep, all of which symptoms were relieved by the spontaneous vomiting of a very acid matter, and the use of stimuli. The pupil remained dilated through part of the next day.

4. The last experiment was repeated, an antacid having been premised, and the proportion of charcoal being doubled. Some dryness of the throat followed, but with no other symptom of the influence of the drug.

5. Fifteen grains of powdered digitalis were taken, with three drachms of the animal charcoal, without the slightest disturbance of the functions.

6. Twelve drops of the officinal hydrocyanic acid were swallowed, with two drachms of the pure charcoal, without a sedative result.

7. One grain of strychnia, dissolved by the aid of a drop of chlorohydric acid, was digested with animal charcoal until all bitterness was removed. The solution, filtered and swallowed, produced no effect; a similar solution, evaporated and tested with nitric acid, gave no red tinge.

8. One grain of strychnia was swallowed, with an ounce of pure animal

[1] Condensed in Braithwaite's Retrospect vol. xiii.

charcoal; no effects due to the strychnia could be perceived.

9. The purgative extracts were next tried, but produced no effect when sufficient animal charcoal was taken.

10. Camphor and musk were removed by animal charcoal from their tinctures, so far that they did not precipitate on the addition of water.

11. Phosphorus was removed from its ethereal solution by the charcoal.

12. Iodine was so far removed from its tincture and compound solution as not to strike a blue colour with starch; and the iodine could not be liberated from the animal charcoal at a red heat.

13. Arsenious acid and a solution of arsenite of potassa were apparently unaffected, either in the hot or cold solution, by animal charcoal. This result, although it agrees with those of MM. Wapen and Graham, does not with the observations of Dr Garrod, who states that animal charcoal "has greater power of removing arsenic from its solution than the hydrated sesqui-oxide of iron."

14. A solution of the bichloride of mercury, being treated with animal charcoal, gave, on filtration, no precipitate with ammonia.

In conclusion, we are perhaps justified in drawing, from the present state of our knowledge on this subject, the following conclusions:—

1st, That animal charcoal has the power of withdrawing, when used at a proper temperature and in sufficient quantity, most, if not all, known vegetable and animal poisonous principles, and certain mineral poisons from their solutions.

2d, That, given at the same time with, or shortly after these poisons have been swallowed, it prevents their deleterious action.

3d, That given in cases of poisoning, it can exert no injurious influence, but, on the other hand, promotes vomiting, entangles the poison, and protects the coats of the stomach against it.

4th, That although it cannot be substituted for the usual antidotes in poisoning by mineral substances, yet it may be usefully employed in conjunction with them, or in their absence.—*Medical Examiner*, Sept. 1848.

205.—*Poisoning with the Essential Oils of Nutmeg and Cinnamon.* By Prof. D. MITSCHERLICH.—The oil of nutmeg was exhibited by the stomach to four rabbits. It is a poison of considerable activity: six drachms were fatal to a large rabbit in thirteen hours and a half; two drachms in five days; one drachm killed a young animal in thirty hours. As a poison it is of nearly equal strength with cinnamon oil, weaker than the oils of mustard, savine, and carraway, and stronger than the oils of fennel, turpentine, juniper, and copaiva.

The symptoms of poisoning with nutmeg oil in the rabbit were—increased frequency and strength of the heart's pulsations, accelerated respiration, at first restlessness, later muscular weakness, very slight or no change of sensibility, and feculent evacuation; as the poisoning advances, gradual failure of the circulation and respiration, diminution of temperature, and death without spasms. There was no diuresis, but the urine was bloody, and had a very peculiar aromatic odour, different from that of the oil itself. On opening the bodies, the odour of the oil was distinctly perceived in the abdominal cavity. In the stomach and intestines were found the usual indications of irritant action. The state of these organs, however, was not sufficient to account for death, which the professor attributes to the absorption of the oil, and its action on the system.

Applied to the skin on the back of the hand, nutmeg oil produces, in from ten to twenty minutes, burning heat and redness. In this respect it is weaker than mustard, and stronger than cinnamon oil.

The symptoms and post-mortem appearances in the rabbit from poisoning with cinnamon oil, are similar to those already described as occasioned by nutmeg oil. The smell detects the oil of cinnamon readily in the blood, urine, and peritoneum.—*Schmidt's Jahrb.* Nov. 1848, p. 156.

206.—*Poisoning by the Tincture of Colchicum. Recovery.*—M. LEROY DES BARRES has reported to the Academy of Medicine, the following case of poisoning by colchicum.

A female, æt. 57, suffered from pain in the epigastrium. Her medical attendant prescribed for her *an ounce* (30 grammes) of tincture of colchicum, of which she was to take a tea-spoonful night and morning in a simple julep of taraxacum. Before commencing this treatment, she was directed to take a purgative draught, composed of syrup of buckthorn and sulphate of soda. By some unfortunate mistake, the whole of the tincture of colchicum was swallowed instead of this draught. In five minutes she felt severe pain in the stomach and bowels, and there was great anxiety; in this state she was seen by M. des Barres. Her face was pale, the features contracted, and the eyes sunk. The pain

in the abdomen was very severe. She vomited once a glairy mucus-like matter, and this was followed by several liquid, dark-coloured stools, accompanied by violent colic. The patient complained of a sense of suffocation and strangulation. The pulse was weak, and only fifty in the minute; the extremities were cold; vision was not affected, and the intellect was clear. There was neither headach, vertigo, thirst, nor dryness of the mouth or fauces. Small doses of tartar emetic were exhibited; these brought away a yellowish-coloured liquid, having a spirituous odour like that of the tincture of colchicum. Vomiting was promoted by draughts of warm water, and the patient then took the ioduretted water recommended by M. Bouchardat: this appeared to relieve the cramps in the stomach and the colicky pains. In about an hour the dose of ioduretted water was repeated. In two hours the patient was suffering from incessant vomiting, with cramps in the muscles of the legs and arms. The extremities were cold, and the hands and arms had a livid hue. Frictions were employed, stimulating poultices were applied to the abdomen, and sinapisms to the feet. The patient still continued to take occasional doses of the ioduretted water. Thirteen hours after the poison had been swallowed, the woman was suffering from great prostration of strength, vomiting, diarrhœa, cramps in the limbs, twichings of the tendons, great agitation, and severe pain in the abdomen. The pulse was 65. Only a few drops of urine had been passed.

On the following day the symptoms continued, the pulse having risen to 90. The heat of the body was more equally distributed; the tongue was dry, thirst intense, and there was entire suppression of urine. The cramps and convulsive motions of the limbs with the feeling of strangulation, had disappeared. Leeches were applied to the abdomen, and emollient medicines prescribed.

In the afternoon the patient had considerably improved, and urine was freely secreted. On the fifth day the fever had disappeared, but there was still some diarrhœa. In the course of a week or ten days the patient had entirely recovered.—*Journ. de Med. de Bourdeaux*, 1848.

207.—*Calcined Magnesia against the Poisonous Effects of Arsenic.* By Emory Bissel, M.D., of Norwalk, Conn.—Peter Galpin, a labourer, aged twenty-seven, a powerful and robust young man, of intemperate habits, attempted suicide on the evening of the 4th of March last, by taking arsenic. As is often the fact, he was prompted to the deed by those horrors and remorse of conscience which so often succeed a debauch. The quantity taken, as nearly as could be determined, was not far from a scruple. When I was first apprised of the fact, two hours had elapsed from the time it was taken. I hastened the messenger who came for me as quickly back as possible, with some thirty grains of sulphate of zinc—in two doses—with directions to administer it as soon as he could reach home on horseback—distant about one mile—to give the second parcel in ten minutes, if needful. I followed as expeditiously as I could: when I arrived he had vomited freely twice, but without any relief. The family had given him copious draughts of a weak infusion of tobacco, which produced no other effect than to increase his sufferings, which at this time were extreme; so much so, that he begged me to kill him at once, if I could not end his pain any other way. His pulse was one hundred and thirty per minute, small, and wiry. He complained of great constriction and dryness of the fauces, but chiefly of a most agonizing pain and burning in the stomach; it seeming, as he expressed it, "as if it were filled with burning coals." As nearly three hours had now elapsed since the poison had entered the stomach, I considered that any further effort to evacuate it would be futile, and that, if life was saved at all, it must be by the antidotal power of some medicinal agent. Having had my attention directed to the experiments of Prof. Peter of Transylvania University, and the case of Lepage published in January and April Numbers of this Journal, in 1847, I determined to give the calcined magnesia a fair trial, and accordingly put it up in drachm doses, to be given every hour mixed in milk and water. During the hour which I remained with him, his symptoms were becoming more unfavourable. The pulse was one hundred and fifty per minute; the constriction and dryness of the fauces extreme; the whole surface bedewed with perspiration; the pain and burning sensation in the stomach seemed augmented to the highest possible degree, whilst the right hand was entirely paralysed: in short, every thing betokened a speedy dissolution. I left him at ten o'clock, in charge of the mistress of the family, whom I knew to be an intelligent and faithful nurse. On visiting him the next morning, instead of finding him dead, as I much feared, I was most happily surprised to find him very quietly dozing in an easy-chair. I learned from the lady, who had been unremitting in her care of him dur-

ing the whole night, that in a very few minutes (not more than five or ten) after taking the first dose of magnesia, he said he felt much relieved, and before the time for the second dose he had fallen into a doze. She stated, that each successive dose had produced the most surprising and marked mitigation of every symptom, and that long before morning he was entirely freed from suffering, and had, on the whole, passed a quiet and comfortable night. The bowels had moved freely and easily twice during the time. He complained of nothing save a general weakness, and a sort of faintness at the pit of the stomach. The right hand had recovered its power, and the pulse had fallen to eighty-five per minute. Directed to continue the magnesia through the day, once in four hours, and to give light nourishment. On the sixth I made my first and last visit, as the young man seemed to require nothing but nursing, and a little time, for the recovery of his strength. I have since learned, that in a very few days he resumed his labour upon the farm, and felt no inconvenience from what he had taken, except a muscular weakness of the lower extremities, which was not very great. The case, in some of its aspects, much resembles that of Lepage, especially in the prompt and efficacious effects of the remedy, and the speedy recovery which followed. Should future cases yield results as gratifying as these two, we may indeed congratulate the profession in the possession of a sovereign and prompt antidote, always at hand, and easily administered, to the dreadful poison by which such numbers of our race have found a terrific and agonizing death.—*Amer. Jour. Med. Sciences*, 1848.

208.—*Recovery from the Effects of a large Dose of Digitalis.* By M. DE COLLEVILLE.—A woman, æt. 68, while suffering from œdema of the lungs, and when nearly convalescent, was ordered to take an infusion of the dried leaves of digitalis, in the proportion of (60 centigrammes) 9¼ grains in a quart of water. The druggist by some accident used (15 grammes) 231¼ grains. This was infused in eight glasses of water, and administered to the patient in divided doses. She was soon attacked with great uneasiness, nausea, bilious vomiting, confused vision, amounting to blindness, ringing in the ears, vertigo, convulsions, and syncope. The face was pale; there was great coldness of the skin, with palpitation; thready, slow, and intermittent pulse, and pain in the abdomen. These effects were produced by four doses of the infusion. A physician who saw the patient early the following morning, found her in a highly dangerous condition. He prescribed saline enemata, sinapisms with warm bottles to the feet, and frictions with camphoretted spirit to the skin. Strong coffee was administered internally. In six hours there was no apparent amendment; the vomiting, convulsions, and fits of syncope continued; but the difficulty of breathing under which the patient had previously laboured had entirely disappeared; there were no longer symptoms of œdema of the lungs, and the chief object then was to counteract the effects of the poison. Syrup of orange-peel and other simple medicines were prescribed, and an enema of assafœtida and camphor administered. Three days after the accident the vomitings were less frequent, and the syncope and convulsions had ceased; but there was still vertigo, with ringing in the ears and hallucinations of vision. In six days the patient had perfectly recovered from the effects of the poison.—*Jour. de Méd. de Bordeaux, and Med. Gazette*, May 11, 1849.

LONDON: JOHN CHURCHILL, PRINCES STREET, SOHO.
EDINBURGH: SUTHERLAND AND KNOX, 23, GEORGE STREET.

FANNIN AND CO., DUBLIN; J. B. BAILLIERE, PARIS;
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MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

JULY, 1849.

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I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

209.—*Bowman on the Eye.*—As promised in the review, we now proceed to notice the more interesting of Mr Bowman's observations.

In addition to the three structures usually recognised as composing the *Cornea*, viz., the conjunctival covering, the thick laminated cornea or cornea-proper, and the thin elastic cornea behind; a fourth, "the anterior elastic lamina," is described as forming the front of the cornea proper, and supporting the conjunctival epithelium. The division of the *cornea proper* into layers is known to be artificial, their number varying with the dexterity of the dissector. Under the microscope, Mr Bowman finds that these lamellæ, as seen at any one part in a vertical section, are about sixty in number, but each does not extend far across the cornea, as they run into each other at numerous points. The layers are united to each other by a delicate membranous tissue, disposed vertically, which is seen to be torn across or divided in separating the lamellæ. Some years ago he first discovered a definite tubular arrangement of the interstices of the corneal tissue. They are more easily seen, on injecting with mercury, in the larger animals than in man. After running parallel for a short distance, they join at an angle with others which cross them above and below. They lie between the delicate laminæ, and their walls are formed by the membranous tissue which joins the laminæ to each other. They present a varicose or jointed appearance. In the human cornea their length between the constrictions may be $\frac{1}{12}$ of an inch, but is often less, and their size is from $\frac{1}{500}$ to the $\frac{1}{800}$ of an inch. These are not to be regarded as a regular system of canals like vessels, but they may rather be compared to the areolæ between the interweaving bundles of filaments of the cellular tissue, all of which communicate, so that the tissue may, like the cornea, be readily permeated by a thin fluid. It is concluded that fluid does not exist in the cornea to a greater extent than, as in

cellular tissue, is sufficient merely to lubricate the interstices, and, therefore, the opacity which occurs when the cornea is stretched, cannot be accounted for by the displacement of a fluid, as is by some supposed.

The *conjunctival layer* is described in man as presenting only from three to four layers of epithelial cells, at first more columnar and becoming flattened at the surface, and resting on the anterior elastic lamina, as on a basement membrane; although Valentin has described, subjacent to the epithelium, a layer of blood-vessels, as representing the corresponding layer of the integumentary system. In man, Mr Bowman finds the conjunctival layer $\frac{1}{500}$ of an inch in thickness, but it is much thicker over the cornea of the larger animals, as in the sheep and calf, where we have found eight to twelve layers, as is likewise represented by Henle and Gerlach; and in the fish, where there are no lids, a very thick, but still perfectly transparent conjunctival membrane may be pinched up over the cornea, to which it is indeed very loosely united.

The *anterior elastic lamina* of Bowman has not hitherto been known to anatomists as a distinct structure. "It is a continuous sheet of homogeneous membrane, nearly similar in essential characters to the posterior elastic lamina of the cornea and the capsule of the lens, being perfectly transparent and glassy, without appearance of internal structure, and being very slightly, or not at all, influenced by acids or boiling." From its deep surface it sends down, among the four or five anterior lamellæ, innumerable delicate filaments, which pass in a slanting direction, decussating. As it is thus tied down to the lamellated cornea, it cannot be raised like the posterior elastic layer, and hence the reason, as Mr Bowman observes, that it has hitherto escaped the notice of anatomists. It is in this tissue, he thinks, that the small hard foreign bodies are impacted, which stick more tenaciously on the front of the cornea than might be expected were they imbedded only in the soft and pulpy conjunctival epithelium, or in the lamelatted tissue. The thickness of this layer in man is from the $\frac{1}{1500}$ to the $\frac{1}{2000}$ of an inch. But it is thicker than the posterior elastic lamina; although it may surprise those who have been in the habit of raising the latter, or of seeing it raised, for demonstration, with very ordinary instruments, to learn that it is only from the $\frac{1}{2000}$ to the $\frac{1}{3000}$ of an inch in thickness; a statement, regarding which, we confess to have taken the micrometer's confirmatory evidence.

The arrangement at the margin of the cornea, by which it becomes continuous with the sclerotic, is minutely described. The interlacing bundles of fibres of the sclerotic are directly continuous with the lamellæ of the cornea. The anterior elastic lamina becomes thinner and sends more numerous filaments inwards to the lamellæ, and at the margin it is lost, having expended itself in filaments which pass into the sclerotic. The posterior elastic lamina is believed by some to extend over part, or the whole, of the aqueous chamber, and by others not to be more extensive than the cornea itself. Mr Bowman finds that at or near the margin it becomes thinner, and, instead of the homogeneous structure, without union by fibres to the cornea proper, which it presents elsewhere, it now gives forwards, and from its extreme margin, fibres of the yellow elastic variety, which have a plexiform arrangement, and a three-fold distribution. The most anterior pass into the sclerotic, after leaving between them and the fore part of that membrane, a flattened space, usually known as the circular sinus of the iris or canal of Fontana; the most posterior curve backwards from the circumference of the anterior aqueous chamber, and, in the form of small pillars, join the iris at its circumference; and the middle set, much the greatest in number, pass outwards to the ciliary ligament or muscle. The latter observation explains what we have noticed, that the ciliary ligament on being raised from behind, will bring away with it the posterior elastic lamina. This is seen after making a transverse section of the eye someway behind the iris, and separating the ciliary body and iris, which come away together. If, then, the ciliary ligament, or muscle, be detached from the sclerotic, it will carry with it the elastic cornea. This is well seen in the bird's eye, but also in the mammalian after some maceration.

Notwithstanding that various observers have described blood-vessels in the cornea in its healthy condition, and although it is a common belief with those who still admit the existence of "serous blood-vessels," that such exist in the cornea, Mr Bowman finds unequivocal proof that none encroach far beyond its border. All the vessels sent forwards by the conjunctiva and sclerotic, on arriving within the corneal tissue, form arches and return. The cornea is thus dependent on the circumferential parts for its nutrition; and this comparative feebleness or slowness of the nutritive process in this tissue, renders it liable to suffer early in certain depraved states of the constitution, becoming hazy or actually

sloughing, as the cases related by Mr Bowman and others amply show. Simple wounds of the cornea are found, if not too extensive, readily to heal by the first intention, without the approach of blood-vessels to the wounded part. Even in a few hours, as he has observed in the case of the lower animals, minute nuclei or cytoblasts, which naturally exist but sparingly in the corneal tissue, are seen to abound in the tissue near the wound, which they soon fill up, and these elements are gradually transformed into products resembling the tissues among which they are laid down. The milky opacity at the wound now disappears, and the increased vessels at the part of the border of the cornea nearest to the puncture, resume their former size. But when the adhesive process fails, union takes place by a species of granulation resembling that in skin or mucous membrane.

As to the development of blood-vessels in the cornea, which is so frequently seen as a diseased condition, Mr Bowman observes that, in the case of an ulcer, there is first observed, stretching between it and the nearest vessels, a greyish semi-transparent tract, from the deposition of the new matter out of which the future vessels are to be constructed. These become developed, and serve to expedite the reparative action by furnishing an immediate supply of blood. As the healing process advances, these vessels dwindle and soon disappear, and the transparency of the part returns. When, as a result of long continued inflammatory action, vessels are developed in the form of a network on the front, he believes that they lie below the anterior elastic lamina; but when they render the cornea of a uniform dull red, that they pass into the lamellated tissue from the sclerotica. In these conditions, he regards the vessels not as the disease, or essentially a part of it, although they indicate its presence and extent, but as the means by which the cornea is enabled to bear up against and get rid of the morbid action, under which its vitality would otherwise sink.—(*To be continued.*)

210.—*Production of Sugar in the Urine by wounding the Brain.* By M. Bernard.—On the 26th of March 1849, M. Magendie announced to the French Academy a very important and entirely unexpected discovery made very recently by M. Bernard. M. B. has found that by wounding a certain part of the floor of the fourth ventricle, the composition of the urine becomes altered, and sugar makes its appearance in it.

The puncture is made by passing the instrument through the inferior orifice of the ventricle, and soon afterwards the urine of the animal (a rabbit), which before the operation is turbid, alkaline, and free from saccharine matter, becomes abundant, clear, and contains in solution a very large quantity of sugar, and resembles that of diabetes. In general, not more than an hour and a half or two hours are requisite for the complete production of this change in the characters of the urine. The blood also contains a large amount of sugar.

The experiments have hitherto been made upon sixteen rabbits; and by varying them, M. Bernard has found that the part of the fourth ventricle which must be wounded to produce this remarkable phenomenon of the appearance of sugar in the blood and urine was very limited, and corresponded to a space situated a little above the origin of the eighth pair of nerves.

These results, which are so surprising from their novelty, cannot at present be in any way explained. They merely serve to show the remarkable influence which the nervous system exerts upon the functions of nutrition; and in this light they deserve the serious attention of chemists.

The experiments, which have also brought to light some other interesting particulars, are being continued upon animals of different kinds, and placed under various circumstances. M. Bernard hopes soon to be able to lay the results before the Academy.—*Chem. Gaz.*, May 15, 1849.

211.—*On the Injection of various Substances into the Veins.* By Drs Manzolini and Quaglino, of Milan.—The municipality of Milan having placed at the authors' disposal a large number of stray dogs, they took the opportunity of injecting various substances into the veins—as pus of various descriptions, blood abstracted for different diseases, and a variety of putrefying animal substances. They then experimented with a variety of poisonous and medicinal agents—as arsenic, corrosive sublimate, iodine, digitalis, quinine, &c. The following are the principal conclusions:—

1. Pus, whether syphilitic, variolous, or tubercular, does not induce corresponding specific affections in the organism of brutes, but constantly determines a gastro-enteritis and enlargement of the mesenteric glands. 2. Recent blood, though abstracted from patients with fever, small-pox, &c., exerts no effect on the health of animals. 3. The inorganic irritating poisons exert their action on the alimentary canal, inducing generally a gastro-enteritis. 4. This predilection for the intestinal tube seems to be due to the

facility with which it becomes an eliminatory organ, by reason of its vast superficies and its easy communication with the exterior. 5. The action excited by pus transported into the circulation explains the colliquative diarrhœa and other gastro-enteric disturbances which individuals suffering from large and old suppurating wounds, open cancer, phthisis, empyema, phlebitis, and gangrenous typhus are liable to. 6. Putrefying substances exert the same effects upon the canal as the irritant poisons. 7. Gastro-enteritis is not met with in those animals which die soon after the injection of these bodies. 8. All poisonous substances, organic and inorganic, whether introduced into the circulation by the veins or by the digestive apparatus, constantly effect an alteration in the crasis of the blood. 9. That these poisons may exert their action upon the nervous system, it is requisite they should be transported into the circulatory current, the affection of the nervous centres being only secondary; in fact, when the stomach has been deprived of the influence of the par vagum by section, the same results are obtained as when this is uninterfered with. 10. *Vegetable poisonous substances* and their alkaloids, however, attack the nervous system in preference to the digestive tube. Some especially affect the brain, as opium; others the cerebellum and medulla spinalis, as the ethers; and others the medulla spinalis alone, as strychnia, quinine, *Lolium temulentum*, &c. 11. Two substances acting upon the same portion of the nervous system, but producing phenomena peculiar to each, when they are given simultaneously, do not confound their actions, but simultaneously manifest their proper phenomena. Thus by giving strychnia to a dog labouring under the tremors produced by *lolium temulentum*, we engraft upon these the tetanic spasms peculiar to the alkaloid. 12. The venous and arterial tree is always found normal, whatever be the substance injected by the veins or administered by the mouth. 13. The remedies known as the narcotics and narcotico-acrids of authors (as aconite, belladona) never induce gastro-enteritis, however introduced. 14. Dilatation of the pupil may be induced by remedies which act on the encephalon, as well as by those which act on the medulla spinalis. In the first case it is due to the torpor which the narcotic substances produce in the nerves of the third pair destined for the motion of the circular fibres of the iris, by which these antagonize the radiated fibres receiving their motor power from the cervical nerves. In the second case the midriasis depends upon the spasm, or excess of excitement, of these last nerves.—*Gaz. Medica di Milano*, 1847, No. 46; and *Brit. and For. Medico-Chir. Review*, January 1849.

212.—*On the Estimation of Urea.* By M. MILLON.—M. M.'s process consists in the conversion of urea into carbonic acid and azote by means of an oxydising agent (nitrate of mercury), and the subsequent estimation of the urea by the amount of the gaseous products. The nitrate of mercury which Millon uses is made by acting upon 125 parts of mercury with 168 of commercial nitric acid, and then, when the action is complete, he adds twice its bulk of water. In this condition the solution is kept, and it is always ready for analysis; to effect which, he takes a glass balloon of a capacity of from 150 to 200 cubic centimetres, and introduces into it, by means of a pipette, from 40 to 45 cubic centimetres of the mercurial solution. On this he pours from 15 to 20 grammes of urine, and washes down that which soils the neck of the balloon with a little distilled water; then he shakes the balloon so as to mix the contents, and immediately adapts a carbonic-acid apparatus containing caustic potash. The reaction of the nitrate of mercury commences even in the cold, but it is assisted and rendered complete by raising the mixture to the boiling point. The weight of the carbonic acid produced is, to that of urea, as 1 is to 1·371. M. Millon states that the process is most constant, and that there are no variations in the results, notwithstanding that uric acid, hippuric, oxalic, acetic, lactic, or butyric acids are present, and that neither albumen, sugar, or colouring matter of the bile will have any influence on the products.—*Comptes Rendus*, xxvi., 1849—*and Brit. and For. Med. Chir. Review*, April 1849.

II.—PSYCHOLOGICAL MEDICINE.

213.—*Visit to the Abendberg Cretin Establishment.* By Dr FORBES.—In the course of a month's tour through Switzerland, in the summer of 1848, the author visited and inspected the interesting establishment of Dr Guggenbühl. He agrees

with Dr G. in considering cretinism to be a truly physical disease—the mental incapacity depending on the imperfect development of the bodily organs, and of course mainly on that of the brain. This being acknowledged as the cause, the treatment requisite is apparent, and is carried out, when, says Dr Forbes, according to the beautiful and most philosophical principle which is adopted by Dr Guggenbühl as the indispensable basis of all his practice, the infant cretin is removed from the low close valleys in which its malady originates to the free, dry, cool, bracing air of the open yet comparatively sheltered and sunny slopes of the Abendberg. When thus removed from the influence of those deteriorating causes which were previously in full operation, the few simple restorative means, long recognised as alone beneficial, can, with a far greater hope of success, be employed; these are, plenty of good food, exercise in the open air, friction of the surface, bathing, moderate mental exercise, cheerful occupation, comfort, and happiness, together with such auxiliaries as medicine can supply. In adopting this practice most gratifying and important results have been obtained. Besides endeavouring to improve the physical powers, Dr Guggenbühl is constantly employing measures intended to act directly in developing the mental faculties. When of a fitting age his pupils must attend the school-room for certain short periods of the day. Dr Forbes was witness to the examination of three or four of the more advanced pupils, and speaks highly of the amount of real knowledge that had been acquired, as well as of the gratification which its acquisition, and the conscious possession of it, evidently conferred on the respective pupils. On one very important point Dr Forbes holds a different view from that of the founder of the Abendberg. Many cases regarded by the latter as examples of cretinism, Dr Forbes believes to be in no respect different from the ordinary idiot of this or any other country. The author's observation in different parts of Switzerland appears to have satisfied him, that the distinction between these two classes is not sufficiently regarded. In respect to the connection subsisting between goitre and cretinism, Dr Forbes is inclined to think that it may very possibly be an essential one, inasmuch as they may be both owing to the same cause, or to a modification of the same cause. In making numerous inquiries respecting cretinism in Switzerland and Piedmont, the author was much struck with the illustration it afforded of the influence of habit in modifying some of our strongest instincts and passions. The mother of an idiot, even in the lowest classes in England, feels the imperfection of her child to be the greatest of personal misfortunes; she looks upon the affliction as of too awful a nature to be thought of, except with a solemn humility; and does all in her power to conceal it from the world. Nothing of this exists in Switzerland. On the contrary, the neighbours, companions, and relatives, sometimes even the fathers and mothers of cretins, had not only no delicacy in showing them, but seemed to make their unhappy oddities a subject of mirth; inquiries in regard to, and personal examination of, the poor creatures themselves, were regarded as essentially odd and ludicrous.—*A Physician's Holiday, or a Month in Switzerland.* By J. Forbes, M.D., F.R.S.

214.—*On Cretinism.* By M. Faucon-neau-Dufresne.—Those labouring under this loathsome affection are divided by Dr Guggenbühl into four classes; 1st, the atrophied; 2d, the rickety; 3d, the hydrocephalic; and, 4th, the congenital cretins. In the 1st class (atrophique) the spinal marrow is chiefly the seat of disease, characterised by paralysis and wasting of the extremities. In the 2d class (rachitique) there exist softening and deformity of the skeleton. In the 3d (hydrocéphalique) there is a tendency to hydrocephalus, with certain symptoms of paralysis. In the 4th (congénital) there exists a very striking disproportion between the trunk and the extremities. The organs in this class are found diseased in very different degrees, and the affection of the mind may vary from simple dulness or heaviness to the most complete idiotcy. One variety of cretinism is distinguished by Dr Guggenbühl under the name of dumb cretinism. Those included under this class, though wanting the sense of speech, possess a much more intelligent expression, and a superior general appearance, to other cretins. They are capable of sustained attention, and for the conveyance of their thoughts, employ gestures sufficiently expressive. This form of cretinism prevails in the canton of Grisons and in the valley of the Rhine, which forms part of the canton of Saint-Gall. Imperfect growth and undue development of certain parts of the body, form striking features in another variety of cretinism. Such are the different forms manifested by those labouring under cretinism, as recognised and described by him, who, animated by the highest philanthropy, has devoted himself to the treatment and education of these wretched beings. M. Faucon-

neau-Dufresne concludes his account by paying a very high tribute to the devotion and disinterestedness of Dr Guggenbühl.—*L'Union Médicale*, Mars, 1849.

[On the occasion of a late visit to this country, Dr Guggenbühl placed in the hands of Dr Coldstream, for publication, several documents relating to the history of his enterprise, these, along with an excellent introduction from the pen of Dr Coldstream, have lately appeared in the form of a small duodecimo. This little work we recommend to the perusal of our readers.]

215.—*On the Employment of Opiates in the Treatment of Mental Alienation.* By Dr Michea.—The question as to the propriety of the administration of opium in insanity has for a long period divided the profession. Some, among whom are Lazare, Rivière, Daquin, Cullen, Odier, Sutton, and Perry, maintaining the salutary effects of its exhibition; while others, and with these Valsalva, Morgagni, Lorry, &c., have entirely proscribed it, regarding it as, in such cases, a most dangerous remedy. According to the latter, opium increases the delirium and agitation of maniacs. The incontestible utility of opium, and the promptness of its action when used in the treatment of delirium produced by abuse in spirituous liquors, has suggested to the author the idea of verifying if this remedy be advantageous or admissible in the treatment of disorders of the mind arising from other causes. He has prescribed it in very many of the forms of disordered mind, among others in mania with paralysis, in acute and chronic mania, in monomania, in hallucinations, and in acute dementia.

In insanity accompanied by general paralysis, the exhibition of opium has always appeared prejudicial; in those individuals where the memory and imagination still retained some traces of vivacity, it caused a momentary increase of delirium, to which succeeded a state of decided intellectual depression. In all it produced drowsiness, injection of the eyes, congestion of the features,—in short, most of those symptoms which indicate the occurrence of cerebral congestion, a frequent intercurrent disease among the insane affected with general paralysis.

The varieties of mental alienation in which the employment of opium has appeared really useful, are—chronic mania; monomania, whether simple or complicated with hallucinations; lastly, acute dementia. In support of this statement the author adduces four interesting cases.

In regard to the action of the remedy, the author believes opium to exercise its influence on the ganglionic system of nerves, and also on the cerebro-spinal system. It produces two distinct actions, not occurring successively, nor the one as a consequence of the other, but both direct and simultaneous; it depresses and it stimulates; it is, at the same time, a sedative and an excitant.

Referring to the fact which experience has amply established, that the subjects of mania are more frequently cured than monomaniacs, and those labouring under acute than those under chronic mania, the author thus illustrates the propriety of the exhibition of opium when exercising its stimulant action. Opium, he says, is a stimulant of the cerebral lobes, it tends, consequently, to increase the delirium, and for the same reason its tendency is to transform the partial derangement of the intelligence (monomania) into the more general one (mania)—to cause an acute form of mania to supervene on a more chronic one.

To obtain, in the treatment of insanity, an advantageous result from the exhibition of opium, it is necessary to administer it without interruption during a certain period, during at least from eight to ten days, and further, in gradually increasing doses. The preparations of the remedy the author makes mention of, are—laudanum, the extract (extrait gommeux), and morphia. Of the former, the commencing dose was twenty drops, on the second day raised to thirty, on the third to forty, and so on, increasing ten drops daily, until the number of a hundred and twenty has been reached; this he has rarely exceeded. Of the extract he has prescribed, as a first dose, five centigrammes, increasing it daily by three centigrammes, until the dose is six or seven decigrammes. As to morphia, one centigramme has been the dose, and he has rarely prescribed more than one and a-half. With the exception of occasional attacks of vomiting, which need excite no alarm, the insane have borne opium well. The employment of the remedy should not be continued from beyond ten to fifteen days; if before the lapse of this period its salutary effect has failed to be produced, its subsequent administration will not prove more favourable, and may even give rise to symptoms of cerebral congestion. — *L'Union Médicale*, Mars, 1849.

216.—*Case of Mania in a Child six years old.* By Mr Morrison.—Unsoundness of intellect in children generally manifests itself in one or other of the forms of idiotcy. The following case of un-

doubted mania occurring in a very young child, has recently been recorded. F. A., æt. six, the daughter of an old furniture broker, was admitted into Bethlehem Hospital on the 30th of August 1842. Her education was good for her years, and she never, in any way, gave her friends reason to suppose that she was deficient in intellect. There existed in the family no hereditary tendency to insanity or epilepsy. The immediate cause of the attack was stated to have been inflammation of the brain, preceded by a fit of convulsions. From her previous history, it appeared that since the age of eighteen months she had been subject to the occasional recurrence of these fits—that they first made their appearance in consequence of teething. Immediately preceding her admission into Bethlehem Hospital, she had been treated in St George's Hospital for inflammation of the brain. At the period of her becoming an inmate of the former, her conduct was violent and mischievous, striking those about her, tearing her clothes, and destroying everything within her reach. She was generally incoherent in her speech, repeating any words she might hear in a monotonous voice, and without appearing to understand them, such as, "Poor thing, poor thing!" Occasionally, however, by strongly arresting her attention, a correct reply could be obtained from her. The expression of her countenance was quick and animated; her general health was good, and she ate and slept well. Sixteen days after admission she was attacked by diarrhœa of a mild character, from which she soon recovered. Shortly afterwards a considerable improvement began to take place in her general behaviour. She gave over many of her mischievous tricks; but still continued decidedly insane. She could not be induced to employ herself in any way, and was subject to violent outbursts of passion. After six months' residence in hospital, she became much more docile. From this time a marked improvement gradually took place in her manner and conduct. After having been about twenty months under treatment, she was reported well. She continued in hospital during six months longer, and at the period of her dismissal appeared to be a modest, quiet, and intelligent looking girl.—*Jour. of Psych. Med. No.* 2.

III.—PRACTICE OF SURGERY.

217.—*On the Use of Chloroform in Surgery.* By Mr Lizars, Edinburgh.—Since the introduction of chloroform by Professor Simpson, Mr Lizars has used it in lithotomy, amputation of the extremities, excision of the mamma, and in strictures of the urethra; "and although" he observes, "I commenced its use with prejudice, I have now become a thorough convert to its utility in almost every operation in surgery. Under its influence, the patient is rendered *pro tempore a cadaver*, and if the surgeon be perfectly master of the anatomy of the parts, he is, as it were, performing a dissection in the anatomical rooms, and is thus enabled to reduce to practice the observation of John Bell, that operating is nothing more than dissecting on the living body.

"In stricture of the urethra, where the patient is of an irritable habit, by putting him under its influence, spasm is totally removed, and that acute sensibility, under which many so afflicted labour, is completely subdued, so that he who is acquainted with the anatomy of the parts cannot fail to carry a small catheter onwards to the urinary bladder in the worst cases of stricture. I have just succeeded in curing a gentleman, thirty-five years of age, who had laboured under stricture for many years, and in whom, four years ago, urinary infiltration took place, requiring free incisions to moderate the sloughing process. From that time he has been afflicted with a perineal urinary fistula. When I first inserted the smallest catheter, it appeared impossible to ascertain the continuity of the urethra, and from the extreme sensibility of the canal, and the irritability of his constitution, there seemed little or no chance of success without the use of chloroform. I have given it to a boy, three years of age, before cutting him for stone, with the greatest benefit."—Extracted from a letter to the Editor of the *Med. Gaz.*, June 8, 1849.

218.—*Local Application of Anæsthetic Agents to Wounds.*—M. Jules Roux has published a paper on the local application of anæsthetics as a means of removing the pain which supervenes on surgical operations. This direct and local anæsthesia, is accomplished by placing the anæsthetic liquid for five, ten, or fifteen minutes, in contact with the wound. This is done by means of a brush, a pledget of lint, a sponge, a bag for etherisation if the agent

be employed in vapour, or (which is to be preferred) by sprinkling the wounds or filling their concavities with the anæsthetic agent. Up to the present time, the attention of M. Roux has been directed to ether, and especially chloroform. It is to this last that almost all the facts stated in the paper have reference.

In his first series of experiments, he used the direct application of the anæsthetic agent for recent wounds, both of small and large extent, arising from operations for phymosis, amputations of finger, thigh, fore-arm; and he observed the following results:—When the patients had not previously been thrown into a state of anæsthesia by inhalation, they complained of a prickling, smarting feeling, an unpleasant degree of heat, severe pain, and soon a sensation of burning. In a short time these phenomena diminished, rapidly disappeared, and gave place to a partial anæsthesia, limited to the parts directly under the influence of the agent employed, a local insensibility, which, during at least forty-eight hours, placed the patient in the most perfect ease. When, on the contrary, the operation had been performed, the patients being in a state of anæsthesia, and when, previous to the return of general sensibility, the wounds were exposed to the influence of the anæsthetic, the pain resulting from its action which is at first irritant, was not felt, and the patients, having recovered entirely their consciousness, passed, without suffering, the first two or three days after their operation. In a second series of experiments, M. Roux turned his attention to combating the pains of the third order, or those which may arise during the process of reparation of the tissues. He has often succeeded in this by means of direct anæsthesia; he, along with many other surgeons, has found, that after general anæsthesia, the pains of the second order are generally of less duration and intensity than when it is not employed. He has remarked, also, that after direct anæsthesia, the sufferings following the operation are considerably diminished; a patient who had a partial amputation of a finger, experienced none at all, and those who had undergone amputation at the thigh and forearm, felt almost none, or so slight, that he did not think it necessary to combat them by successive direct applications of chloroform. Again, the pains of suppurating wounds have been soothed and almost removed by the local application of chloroform; and this application, far from causing any unpleasant affection of the wounds, has appeared, on the contrary, to exercise a happy influence on their progress. M. Roux observed, with some degree of astonishment, that the chloroform which reddens so painfully the skin, covered or not by its cuticle, without causing complete anæsthesia, produces, on the contrary, on wounded surfaces, along with a momentary irritation, a well marked insensibility. The reason of this difference is altogether anatomical: direct anæsthesia, for which he prefers the liquid chloroform to that in a state of vapour, is remarkable for its innocuous properties; he has never had to regret having had recourse to it. In no case, not even when he injected sixteen grammes of chloroform into the tunica vaginalis of a patient suffering from hydrocele, has he remarked any appreciable phenomenon which could be attributed to the absorption of the anæsthetic fluid. He has always been struck with the calmness of the patients, the absence of febrile reaction, the simplicity and regularity in the progress of suppurating wounds.—*Archives Générales de Médecine*, Jan. 1849.

[For further information on local anæsthetics and their applications, the reader is referred to the analyses of the papers of Drs Simpson and Nunneley, and MM. J. Roux and Moreau, in the Retrospect for 1848, pp. 180, 270.]

219.—*Old Standing Stricture of the Urethra, with Ulceration behind the Contraction, and Extravasation of Urine into the Corpus Cavernosum, causing Gangrene of that Body.* By Mr CURLING.—A corpulent man, aged sixty-five, a master drover, had been the subject of stricture in the urethra for thirty-five years; but had always been able to pass his water, though for some time in a very diminished stream. On the night of the third of March he was prevented from sleeping, by the occurrence of great pain in the penis, which he found much swollen. On the Sunday morning the swelling of the penis having increased, and being in great pain, and unable to pass his water, he applied to a medical gentleman, who attempted to pass a catheter, but, according to the patient's account, he did not succeed in reaching the bladder, though about a pint of urine, mixed with blood, escaped. This afforded him only temporary relief, and he was brought to the London Hospital about seven P.M. He was then in great pain, and much depressed, with a small and quick pulse. The penis was in a state of erection, and the skin covering it and the prepuce were red and œdematous. The scrotum pre-

sented its usual appearance. An attempt was made to pass a catheter, but the instrument was arrested about the bulbous part of the urethra, and a small quantity of urine escaped. Mr Curling was sent for, and, on examination, finding no swelling or tenderness in the perineum, and no appearance of mischief about the scrotum, he made a free incision through the skin and cellular tissue on both sides of the penis. Finding the left corpus cavernosum tense and fluctuating, an opening was made into it, and immediately a quantity of urine, mixed with blood, gushed out, and continued to flow for some time. The opening was afterwards enlarged, and the tension of the penis subsided. But the part became sloughy. It was impossible to pass an instrument into the bladder. The urine continued partly to flow from the urethra, but chiefly from the opening in the corpus cavernosum. The patient sank gradually, and died March 9th.

Post-mortem examination sixteen hours after death.—The organs of the chest and abdomen were healthy; the kidneys were large, and their glandular structure healthy. Their cavities were dilated; the ureters were also dilated. The coats of the bladder were much thickened, and its mucous membrane was swollen, and presented the dark leaden appearance indicative of inflammation. The prostate gland was about the usual size, but its follicles were much dilated, and filled with a thick viscid fluid. The prostatic ducts were enlarged sufficiently to admit a small probe. There was a close stricture of the urethra, commencing about four inches and a half from the orifice, and extending to the membranous part: in extent about two inches. Anterior to the bulb an ulcerated opening communicated with the left corpus cavernosum. The urethra, both before and behind the stricture, was coated with lymph. The substance of the left corpus cavernosum was dark and sloughy.—*Med. Gazette*, March 30th, 1849.

220.—*On Abscesses of the Iliac Fossa.* Dr De Saussure (one of the editors of the Charleston Medical Journal), has contributed a memoir on this subject. His remarks do not include the cases in which they occur in the puerperal state, although we believe the symptoms in both cases to be almost identical, and that the only distinction that can be drawn, is that in puerperal females the disease may occasionally originate in the broad ligaments. In speaking of the *causes* of these abscesses, he quotes the opinion of Velpeau,* Grisolle,† Dupuytren, Burne,‡ Puchelt, and Copland,§ and expresses his own belief that their origin is often involved in obscurity.

The *progress* of iliac abscess depends much upon its cause and its position. If it arise from ulceration and perforation of the cœcum or its appendix, the pus may either be effused into the general cavity of the peritoneum, or else, adhesion having previously formed, the abscess may become circumscribed, and the fluid make its way to the exterior, or the ulceration may take its course into the cellular tissue, connecting the cœcum with the iliac muscle, constituting one of the forms of iliac abscess especially noticed by Velpeau.

The *symptoms* vary with the origin of the affection. If it depend upon inflammation or perforation of the cœcum, the appearance of a tumour in the iliac region will be preceded by colic and diarrhœa, or by constipation and vomiting. The pain, though diffuse, is most severe in the iliac region, but no actual tumour can be detected, although this region is more elevated than the opposite one. When, on the contrary, the abscess is unconnected with inflammation or ulceration of the cœcum, the appearance of the tumour precedes for some days, or even weeks, the occurrence of the pain, which comes on by degrees, consisting, at first, of a feeling of weight and tension in the iliac region, accompanied by a sense of weight and numbness in the corresponding leg. If the patient be now examined, the presence of a tumour, deep-seated in the iliac region, can be determined; the tumour is generally hard and smooth, the abdominal walls being freely moveable above it. The pain now increases in severity, and radiates towards the umbilicus and pubis, and down the thigh; extension of the latter is painful, and it is usually kept in a semiflexed position. The tumour now increases rapidly; constipation is most commonly present, although diarrhœa sometimes occurs; the system begins to sympathise with the local disorder, and febrile symptoms appear.

The author gives a case, illustrating very well the symptoms and progress of this form of iliac abscess, the abscess com-

* Leçons orales de Clinique Chirurgicale. Vol. iii.

† Phlegmon des Fosses Iliaques; in Archiv. Gen. 3d Series. Vol. iv.

‡ Medico-Chir. Trans. Vol. xx. p. 200.

§ Dictionary of Practical Medicine. Art. Cœcum.

mencing in the cellular tissue filling the iliac fossa, and the pus being ultimately evacuated by an opening midway between Poupart's ligament and the anterior superior spine of the ilium. In cases of this sort, if seen at an early stage, the fact of the tumour in the iliac fossa, over which the abdominal walls can be freely moved, at once establishes the true nature of the affection; but when the inflammation and swelling have extended to the abdominal walls, it becomes doubtful whether the disease is simple abscess of the iliac fossa, or whether the suppuration is the result of caries and necrosis of the bodies of the lumbar vertebræ. The apparent shortening of the limb, and its semiflexed position in walking, may also give rise to suspicion of disease in the head of the femur or the acetabulum. These doubts are often only solved by the progress of the case.

Grisolle has stated, that it is scarcely possible to mistake iliac for lumbar abscess, if we examine into the patient's previous history. The first symptoms, he observes, of psoas abscess are weakness of the loins, some difficulty in walking, and inability to extend the leg; the pain is referred, not to the groin, but to the back; the disease approaches insidiously, without fever, and swelling of the iliac region only takes place late in the affection, after the other symptoms have been developed for some time; whereas, in iliac abscess, the first symptoms are referred to the groin, and a tumour is perceptible there long before the pain in that region, and the difficulty in walking, become marked.

The author observes, that the diagnosis is not so easy as Grisolle maintains. Velpeau confesses that in one case he was deceived, and actually mistook an idiopathic iliac abscess for a psoas abscess; and the author relates a case of psoas abscess, in which the symptoms were strikingly similar to those of his case of iliac abscess to which we have alluded.

In both there was a swelling to the left iliac region, attended by severe pain, but unattended by pain or weakness of the loins; in both there was complete inability to extend the limb, progression was painful, the leg flexed, the foot turned inwards, and the points of the toes closely touched the ground; in neither did a careful examination yield any evidence of disease of the vertebræ or of the hip joint. The only symptom existing in the second case, and not in the first, was œdema of the loins and left leg and thigh. But, excepting the œdema of the loins, this is of no diagnostic value, as it would also occur in iliac abscess, seated between the iliac fascia and the iliac muscle, as the presence of pus in that position would impede the return of the venous blood. Although œdema of the loins never can arise from iliac abscess, it is not of constant occurrence in psoas abscess, only making its appearance when the pus finds its way into the large muscles of the loins. The author concludes his remarks on the diagnosis between iliac and psoas abscesses by observing, that it must depend upon a careful examination into the patient's history and past personal condition, followed by a minute study of the order in which the different symptoms attending his attack have developed themselves, the first period at which the pain and swelling made its appearance in the groin, and the nature and degree of this swelling, both at its first appearance and during its subsequent progress.

A case in which a fæcal tumour was confounded with iliac abscess, is given in the Archiv. Gén. vol. xx. p. 501; and cases are recorded by Churchill, Bucheteau, and Brara, in which pelvic abscesses have even been mistaken for sciatica.

From abscesses having their seat in the abdominal walls, they may be distinguished by the fact, that in the early stages of iliac abscess, the abdominal walls are freely moveable over the tumour, whereas, in the former, the tumour moves with the abdominal walls. From circumscribed, acute, or chronic peritonitis, iliac abscess may be distinguished by the character of the pain, which in the former is more sharp and lancinating, and is generally preceded by rigor, and attended by nausea, vomiting, hiccough, and in time, fever. From diseased ovary it may be distinguished by the ovary being moveable, and by a rectal examination. It is difficult, if not impossible, to distinguish an abscess between the peritoneum and the iliac fascia (sub-peritoneal abscess), and inflammation of the psoas muscle.

With regard to the prognosis, Velpeau regards it as favourable; Grisolle, on the other hand, says, that of seventy-three cases twenty were fatal and eleven serious. The author correctly observes, that much depends on the course the abscess takes.—*Charleston Med. Journ.* No. vi. 1848.

221.—*Impaction of a Halfpenny in the Pharynx for eight months.*—By Dr Oliver Ward.—A boy, aged one year and eight months, came under Dr Ward's care, June 23d, when his breathing was so loud and stridulous, that it resounded

through the hall in which he was waiting. As soon as Dr W. saw him, the child began to cry so convulsively, and was siezed with such violent coughing, that a close examination of his throat was impossible. He was pale and emaciated, and seemed decidedly phthisical. The glands of the neck were somewhat enlarged, and the chest sounded well on percussion. His mother observed, that he was quite well and hearty till March 3d, when she supposed he swallowed a halfpenny with which he was playing, as he began to choke immediately, and the coin could not be found afterwards, and from that moment his breathing had become stridulous. She was then in Coventry Barracks, and she took him to the regimental surgeon, who, thinking it an attack of irritation from teething, merely gave him some castor oil. At this time, besides the dyspnœa, he was constantly dribbling a thick mucus, and he could only suck one mouthful of milk at a time, being forced to withdraw from the breast with each effort of swallowing. The mucus was so profuse as almost to choke him; and these symptoms, with an increasing cough, continued for three months, till a short time before he came under Dr Ward's care, when the dribbling had almost ceased. The mother next took him to the Coventry Hospital, where the case was again considered to be laryngismus from teething, and was treated accordingly. Dr Ward concluded, that the bronchial glands were affected with tuberculosis, as well as those of the neck, and, pressing on the recurrent nerves, were causing the stridulous breathing. He therefore prescribed an iodine liniment and the syrup of the iodide of iron. Under this treatment the child rapidly improved, with occasional relapses, and thus seemed to confirm his diagnosis, when, on October 25th, his mother brought him, looking comparatively well, and produced the halfpenny, which, she said, he had taken out of his mouth the day before, and put it into his father's hand, after a severe fit of coughing. There is now, however, considerable hoarseness when he cries or coughs, the latter symptom not having ceased with the removal of the cause. The halfpenny was very much worn or corroded, and covered with a thick coating of dried mucus or masticated food. From this time the patient has gradually improved, and may now be considered convalescent. Dr Ward related another case, in which a halfpenny had been impacted for three days, and in which the symptoms were similar, particularly the dribbling of the saliva and mucus.—*Pathological Society of London. Dublin Medical Press*, November 29, 1848.

222.—*Extirpation of a Cancerous Submaxillary Gland.* By M. JOBERT.—M. Jobert extirpated the submaxillary gland, which had become cancerous, in a woman, sixty years of age. This gland, which was about the size of a small hen's egg, projected on one side below the lower jaw, on the other side into the mouth under the tongue, which it raised up; after having loosened it by a few strokes of the bistoury and scissors, M. Jobert was able, by continued but moderate traction, to isolate to a certain degree the diseased organ, without almost again using the knife. The gland was removed by the mouth without any external wound. The hemorrhage was very slight and easily arrested. On examination, the gland very distinctly showed its cancerous degeneracy, more advanced towards the middle of the organ than in the rest of its extent. After the extirpation of the gland, the index finger placed into the empty space left by the tumour, could with difficulty reach the bottom; and it seemed evidently the submaxillary gland that had been removed.—*Gazette des Hôpitaux*, January 13, 1849.

223.—*Reduction of Simple Dislocation of the Astragalus.* By Mr CROSSE.—At a meeting of the Norwich Pathological Society, Mr Crosse related the history of a case of simple dislocation of the astragalus, admitted under him in the Norfolk and Norwich Hospital. The patient had been thrown out of a dog-cart: on his admission the limb presented all the symptoms of dislocation of the astragalus, the sole of the foot being turned inwards, and the foot resting upon its outer edge, while that end of the astragalus which articulates with the os naviculare, was dislocated upwards and outwards, lying just under the skin. Neither tibia nor fibula was fractured. In reducing it, extension was made from the knee direct, and the heel grasped by assistants, who applied their force in this direction with one hand, the other being placed upon the dorsum of the foot, he at the same time endeavouring to favour the return of the bone by immediate pressure on the dislocated end. Mr Crosse finding that it did not yield to these means, and feeling the tendo-achillis very tense, divided it with a tenotomy knife, and upon resuming the extension, the bone was returned somewhat suddenly into its place after a few minutes, and the shape of the limb quite restored. Chloroform was administered

in this case, but not very successfully.—*Provincial Medical* and *Surgical Journal*, December 13, 1848.

224.—*On Paralysis of the Circumflex Nerve.* By M. COMON.—M. Comon gives a case to illustrate the fact, that paralysis of motor nerves may depend on neuralgia of the sensitive nerves with which they are associated. A recruit was suddenly seized with intense pain in the right clavicular, and especially in the axillary region, extending to the deltoid along the course of the circumflex nerve. The pain was aggravated by motion or pressure on the deltoid, or in the axilla.

On the following day the pain had left the deltoid, and was barely perceptible in the axilla; but the deltoid was now paralysed, and the power of raising the arm to the horizontal position was lost. The case yielded to counter-irritants, and electro-galvanism.

The author draws the following distinctions between paralysis of the deltoid, and of the serratus magnus.

1. When the paralysis is independent of any injury, there is no pain in the muscles themselves. In paralysis of the deltoid, the pain proceeds from the axilla, follows the course of the circumflex nerve, and in the mass of the muscle we find a point which is tender on pressure. In paralysis of the serratus magnus, the pain extends from the axilla to the thoracic wall.

2. In the former affection, the patient cannot raise the arm from the body, not even when the scapula is pressed against the ribs; in the latter there is difficulty in moving the arm.

3. In the former, the scapula is drawn downwards and displaced; in the latter, it is drawn upwards, and, as it were, removed from the ribs by the contraction of the *trapezius* and *levator scapulæ muscles*.—*Gaz. des Hopitaux*, No. 58, 1848.

IV.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

225.—*Superfœtation—Double Uterus.*—A female, native of Modena, previously mother of six children, became pregnant for the seventh time in 1817. Nothing unusual was observed, with the exception that the uterus appeared to be unequally distended, a furrow being perceptible along the median line. On the 15th of February 1817, she was delivered of a male infant at full term and well developed. The placenta was expelled naturally, and the woman recovered her usual strength, but it was remarked that one half of the abdomen was still enlarged, and the movements of a fœtus could be distinctly ascertained. The patient continued in excellent health until March 14th, just a month, at which time labour ensued again, and she was a second time delivered of a male infant, living and well formed. In 1822 she became pregnant again, and bore a child now living.

Various explanations were given of that extraordinary case, and amongst others it was considered as a case of superfœtation, with double uterus, by M. Binogli. The justness of this opinion was verified last year by the death of the patient from apoplexy. On examination, the uterus was found to be double, with a single cervix. The preparation is preserved in the Hospital at Modena.—*Encyclograph Méd.*, Fev. 1849, and *Prov. Med. and Surg. Journal*, May 30, 1849.

We shall here add an extract from a letter by Dr A. N. Read of Andover, Ohio, to the editor of the "Philadelphia Medical Examiner." "Permit me (he says) to mention to you one of nature's freaks in generation, which occurred in an adjoining township the past summer. A mare at one birth brought forth a well-formed colt and a mule. She was put to the horse some two or three days after having received the jackass. Both the colt and the mule are doing well. I am aware that the fact of impregnation by different males is not new to physiologists, but the great difference in time, in this instance, I thought, was worth mentioning."—*The Philadelphia Medical Examiner*, September 1848, and Nov. 1848.

226.—*Catheterism of the Fallopian Tube to cure Sterility.* By Dr TYLER SMITH.—"There may be," says Dr Smith, "mechanical impediments to the passage of the ova from the ovaria to the uterus, through the Fallopian tubes. There may be obliteration and adhesion of the ovarian extremities of the tubes to the ovaria; or there may be simple occlusion of the uterine extremity of the tube, so as to prevent both the ascent of the spermatic particles and the descent of the ovule. This part of the generative canal is of especial importance, as it is the narrowest portion, the point where the slightest impediment must necessarily produce sterility. A plug of hardened mucus of the most insignificant character—the merest debris of the Fallopian secretion—may

cut off an illustrious race, or change a dynasty. It is to this cause of sterility, which I believe to be very common, and easily, and safely remedied, that I wish to direct special attention.

"We find in practice that in the great majority of cases of sterility, there is a good state of health, the uterine secretion appears regularly, and there is neither appreciable pain nor disease in any of the reproductive organs. The mere absence of child-bearing, all the conditions of fertility being apparently present, is the only symptom. This is, in fact, a reason why a vast number of cases never come under medical treatment at all. I submit, that in these cases of good health, combined with sterility, the defect can only arise from some mechanical impediment, such as can be remedied by Fallopian catheterism. We sometimes see these cases after years of barrenness, suddenly, and without any apparent cause, give way, and the subjects of them bear children. Such cases are, I have no doubt, cases of Fallopian impediment, relieved at length by accident, but which might have been remedied long before by art."—*Lancet*, June 9, 1849, p. 604.

The instrument, in the use of which the speculum is always required, consists of a small silver catheter, bent like the male catheter, or the uterine sound, to adapt it to the curve formed by the uterus and vagina, and having a lateral curve at the distal extremity, pointing, when *in situ*, to the uterine mouth of the Fallopian canal. Through this catheter a fine whalebone bougie is passed into the Fallopian tube. When the small bougie is thus passed so as to project at its Fallopian extremity, the instrument represents accurately the singular direction taken by the generative canal, from the mouth of the vagina to the fimbriated extremity of the tube.—*Lancet*, May 1849, p. 510.

[We doubt both the practicability and utility of this ingenious contrivance of Dr Smith's. It is difficult to conceive that the point of the instrument should skip over all the mucous folds and follicles of the uterine cavity to arrive safely at an orifice, itself capillary in size, and beset with small rugæ of the soft mucous membrane. Dr Smith may succeed in passing his instrument in a uterus removed from the body and laid flat upon an anatomical table, but it is in the highest degree improbable that he should succeed in passing it in the living female, and, in any case, he can never know certainly whether his little wire has really passed along the Fallopian tube, or whether it has been curled up into the uterine cavity, or whether it has perforated the uterine tissues.]

227.—*Tincture of Indian Hemp in Sanguineous Uterine Discharge.* By Dr Churchill.—Dr Churchill, in a communication to the Dublin Obstetrical Society, stated that he was indebted for the knowledge of the utility of this medicine to Dr Maguire of Castlenack, who had discovered its value in this class of cases by accident. Dr Maguire had prescribed a small dose of the tincture of Indian hemp for a poor woman labouring under some form of neuralgia; and on inquiring into the effects a few days afterwards, the patient declared that it had cured both her complaints, and then, for the first time, informed Dr Maguire that she had been suffering from menorrhagia. This led him to try it in some similar cases, and finding equally satisfactory results, he mentioned the fact to Dr Churchill, requesting him to try it, which he has done extensively. Dr Churchill mentioned it to the late Dr Hunt and other friends, and the remedy he believes has had a pretty fair trial; and if their experience (as he believes) confirms his, the profession has reason to congratulate itself upon the addition of a most valuable remedy for a class of diseases whose materia medica has been hitherto very limited. The largest class of cases in which Dr Churchill has found the most unqualified benefit are those of menorrhagia, where the discharge, though excessive, is fluid, and but little mixed with clots, and when the uterus is not enlarged. In many such cases, five drops of the tincture three times a day have stopped the discharge in 24 or 48 hours. When there is pain, too, if it be not excessive, relief is obtained without the addition of another anodyne. In other cases, when the discharge, whether too much or not, has returned too frequently, Dr Churchill has succeeded in arresting or postponing it to the proper period by the tincture, just as can be done by means of ergot of rye. In those cases of menorrhagia, when the uterus is much congested and enlarged, and where the discharge is largely mixed with coagula, although it has succeeded in many cases, yet it has failed in other instances, and the success in some has been incomplete. Nevertheless, even in these, it is of great value; and finding that it possessed power even over uterine hemorrhage, it occurred to Dr Churchill to try it in threatened abortion at an early period of the attack, when the hemorrhage was slight, and the pains rare and weak. In such cases, ergot of rye is out of the question; lead has but little power.

Opium and cold applications and quiet are our principal remedies, but they often fail; and, therefore, the addition of a direct and powerful agent which should combine an astringent with an anodyne, would be a valuable acquisition. Dr Churchill has now tried it in six or seven such cases, and he has found that when employed sufficiently early, it succeeded remarkably well, but that at a later period it failed partially or wholly. Dr Churchill does not pretend to explain its *modus operandi*; he can only say, that it appears to exert an astringent power in hemorrhages from mucous surfaces, and, also, to have a sedative or anodyne effect. The preparation he has invariably used is Mr Donovan's tincture of the resin. He begins with five drops three times a day, in a few cases increasing it to ten, but seldom more. The effects are very soon seen, generally in twenty-four or forty-eight hours, often much sooner, nay, in some cases mentioned to Dr Churchill by Dr Hunt and Dr Maguire, the effect was instantaneous. In some cases, the beneficial effect was accompanied by a slightly unpleasant feeling in the head, resembling that from an extra glass of wine. In one case only has Dr Churchill seen any more disagreeable results; but in that, five drops produced an extraordinary degree of nervousness and a sense of sinking, almost of dying, which gradually passed off.—*Medical Times*, May 14, 1849.

228.—*Iodine in Congestion and Erosion of the Cervix Uteri.* By Dr CHURCHILL.—In a communication to the Dublin Obstetrical Society Dr Churchill stated, that after the elaborate work of Dr Bennett, and the excellent paper of Dr Evory Kennedy, it would be superfluous for him to enter into a description of congestion and erosion of the cervix uteri. He quite agreed with those writers as to its being much more frequent than was heretofore believed, and, also, that it is neither easily detected nor easily cured without the use of the speculum. At the sametime, he thinks it neither necessary nor becoming to propose an examination with this instrument in every case of vaginal discharge; a degree of delicacy and discrimination should always be exercised. This is particularly necessary with nervous women. The author has known irremediable mischief result from neglecting this consideration. Again, if it be possible to avoid it, he should consider it wrong to propose an internal examination to an unmarried female. In accordance with these views, whenever he is consulted for a whitish or yellowish vaginal discharge, or for leucorrhœa, Dr Churchill always makes an attempt to cure it by general means, such as blisters to the sacrum, balsam of copaiba, ergot of rye, &c., with local baths of cold water or astringents. Many cases are thus cured; but if he fail, he thinks it fair to assume that there is either congestion or erosion, requiring other local treatment, and in the majority of cases he has found this to be so. The usual application is nitrate of silver, acid nitrate of mercury, nitric acid, chloride of zinc, all of which he has repeatedly tried with great benefit; but it occurred to him (Dr Churchill) that caustic iodine would probably answer better than any of these singly, inasmuch as it possesses sufficiently strong caustic properties, and, in addition, would be likely to act beneficially in reducing the enlarged cervix. The preparation Dr Churchill employs is of the following strength:—℥j. Iodinii, ʒij. Potassæ hydriodatis, ʒij. Aquæ destillatæ, ʒij. Spiritus vini. ℞., and after four or five years' trial, he can truly say that he has found it the best application for congestion, erosion, or superficial ulceration, of all that he has tried. Dr Churchill usually commences with a single application of nitric acid, or the acid nitrate of mercury, and then, after a few days, he paints the entire cervix with the iodine. This must be repeated once or twice a week, but not oftener, for whenever he has attempted its more frequent use he has found the uterine irritation rather to increase than diminish; and this will probably explain why these trifling complaints take so long a time to cure. Dr Churchill had seldom succeeded in less than two months if the congestion was considerable, and many cases have required a much longer time. The application occasions no pain at all, unless the orifice of the vagina should be touched by the caustic, which may happen if it be applied too profusely. In one case, the patient complained of a metallic taste in her mouth, in five minutes or less after each operation. After one or two applications, the cervix will generally be found to have diminished in volume, to have lost its tenderness, and the eroded surface to have lessened in extent, and to have assumed a more healthy appearance. Dr Churchill strongly recommends that the application of the iodine should not cease abruptly, but first be diminished in frequency, then left off, and resumed if, as is very common, any of the symptoms return.—*Medical Times*, May 14, 1849.

V.—MATERIA MEDICA AND THERAPEUTICS.

229.—*The Cotyledon Umbilicus in Epilepsy.* By Dr Joseph Bullar.—Several years ago the expressed juice of the Cotyledon Umbilicus was recommended to a lady labouring under epilepsy, which had not yielded to medical treatment, and under its use the disease was entirely removed, and has not returned. The patient was under the care of Mr Salter, of Poole. Subsequently, Dr W. Bullar recommended the juice for a child in the neighbourhood of Southampton, where the plant grows, and the epilepsy was cured. Dr Joseph Bullar's trials have been made with the extract of the expressed juice. He observes:—

"From the experience I have had in a considerable number of cases (several of which were of a very hopeless kind), long perseverance is necessary; and if the number and violence of the fits are lessened, there are good grounds for hope and further perseverance. In all the cases there has been a marked diminution in the violence and frequency of the attacks; and as, in two cases (one of which I heard of today), it has first increased the violence of the fit, and as in others there have been transient symptoms of increased nervousness and headache, requiring a short suspension, I am in hopes that it may prove a true anti-epileptic. It is certainly in many cases nervo-tonic, as the improved nervous tone is shown by quieter sleep, fewer dreams, better spirits, more ability to take exercise, and a consciousness of general improvement. It has no other action on the body that I am aware of. It certainly produces no action on the bowels, for when there has been costiveness (which is so commonly the case in epileptics) the usual medicines to keep up a natural action have been required. I will briefly relate two cases which have impressed me strongly with the powers of the medicine, and the importance of steady perseverance.

"One of these patients had been epileptic for some years; she was of an excitable nervous system, and had suffered much anxiety. During the year which preceded the use of the cotyledon, she had attacks of epilepsy every three weeks, the attacks consisting of eight or nine fits, lasting from twelve to twenty-four hours. She has, with few intervals, taken the cotyledon since April 1848, and she has had but one fit during the last seven months, and that a slight one. Her health has improved.

"The second was a younger woman, about 22, who had been epileptic since she was six years old. She was muscularly strong, and her general health good, except costiveness and slight leucorrhœa. The fits occurred once or twice a week, occasionally (but rarely) there was an interval of three weeks. No remedies had been of any use. She began to take the extract in April, and continued it until October, with a few intermissions. The fits had become very few, and more like short fainting fits, in which she did not lose her consciousness. In November she went to France, and I learned a fortnight ago that she had had but two of these slight fainting fits since, and six months have elapsed.

"Now, neither of these cases can be strictly said to be cured, the fits may return, but yet they are sufficient evidence to justify perseverance in other cases.

"Through the kindness of the attendant surgeon, I had an opportunity last year of trying the extract of cotyledon in five patients who were incarcerated for life in the workhouse, on account of epilepsy; they had been epileptic for five, eight, twelve, thirty, and fifty-eight years, and in all the mind was weakened. I did not persevere more than three months, as the attacks, though fewer, still returned. Subsequent experience having shown me that much greater perseverance was necessary, I examined the notes of these cases, and found on comparing the difference between the number of fits which the patient had before the use of the extract, and those which occurred during its employment, so striking a diminution as to supply confirmative evidence of its power.

"The juice is prepared by bruising the leaves and leaf-stalks in a mortar, and expressing the juice from the bruised mass through a cloth. One teaspoonful twice a day of the juice. I have prescribed five grains of the extract (which is made by evaporating this juice) twice a day, and occasionally three times.

"I cannot finish this communication," Dr Bullar concludes, "without repeating that disappointment will surely follow, if the patient and practitioner are not willing to persevere; and unless, besides the assumed specific, each case is not treated for its individual peculiarities." — *Prov. Med. Journal*, May 30, 1849.

[Considering the very slender nature of the evidence of the anti-epileptic powers of this drug, we have been astonished at the amount of attention which it has attracted. Certainly many suggestions in therapeutics with more convincing facts in their support fall daily into oblivion.

We hope, however, that numerous trials of the *Cotyledon* will soon determine the question of its utility, and we request those of our readers who may try the drug, to oblige Dr Bullar, of Southampton, by communicating to him the results of their experience, favourable or unfavourable. There is, at least, no proper evidence of the specific action assumed by Dr Bullar. The exacerbation of the disease, observed in one or two cases in commencing the use of the medicine, was quite as likely to have been accidental and unconnected with the employment of the cotyledon. Paulus Ægineta and Galen recommend the application of the navel-wort to wounds, on account of its alleged cooling and discutient properties; but it enjoyed repute among the ancients, more especially as a lithontriptic and diuretic. Dioscorides describes two species—the *Cotyledon Umbilicus* and the *Cotyledon serrata*. Parkinson, in his "Theatrum Botanicum" (1640), and Bakewell (1737), ascribe to it similar virtues; but in the more recent works on Materia Medica and Medical Botany, all notice of the plant has been generally omitted, or they have merely copied the remarks of the older writers. Its use in epilepsy was suggested to Mr Salter, by the perusal of an article in an American Medical Journal, recommending its employment in this disease. The plant grows abundantly in England and Ireland, and has been found in many places on the west coast of Scotland by Professor Balfour. Its favourite sites are walls, rocks, and old buildings. It is in flower at the present time. The *Cotyledon Umbilicus* (Lin.), *Umbilicus pendulinus*, D.C. Navelwort, or Wall Pennywort, belongs to the class *Decandria* and order *Pentagynia* of the Linnæan arrangement, and to the natural order *Crassulaceæ*. The whole plant is succulent, with a round stem from six inches to a foot in height; the leaves are mostly radical, peltate, and depressed in the centre; the flowers, which are of a yellowish-green colour, are arranged on a simple pendulous raceme. Mr Salter (Med. Gaz., March 2) states, that the plant may be used as long as the leaves remain green and succulent, and every part of it may be employed for the expression of the juice, with which the leaves, however, are the most abundantly supplied.]

230.—*The Mechanical Leech of* M. Alexander.—This apparatus is intended to supersede the use of leeches. It consists essentially of two parts—an instrument for puncturing the skin; and another for promoting the flow of blood by removing atmospheric pressure from the punctured part. The puncture is effected by a lancet, the blade of which has the form of the cutting apparatus of the leech. This lancet is fixed in the mouth of a tube, and projects about the eighth of an inch beyond the edge of the tube. It may be elevated by a small lever, so that its point shall be within the tube, in which position it is secured by a catch. Attached to the opposite end of the tube by a piece of vulcanised Indian-rubber, which acts as a spring, is a piston, which is pressed down by a rod, and, on removing the pressure, is drawn back by the Indian-rubber spring. The piston being pressed down, the open end of the tube in which the lancet is fixed is placed over the part to be punctured; the pressure is now removed, when the piston is drawn back by the spring, and exhausting the air within the tube, the skin is forced up into the mouth of the tube. On loosening the lever by which the lancet has been elevated, the latter is drawn down by a spring, also of vulcanised Indian-rubber, so as to effect the puncture. The cutting instrument is now removed, and a glass tube, with a piston similar to that already described, is placed over the puncture, the air within being exhausted, so that the tube adheres to the part, and the blood flows freely into it. Half a dozen or a dozen tubes, each of which would draw as much blood as a large leech, might be thus attached in two or three minutes. The apparatus, consisting of a cutting instrument and six or twelve suction tubes, together with sundry implements for cleaning the lancet and tubes after use, are contained in a small case. It is very neatly got up, and we understand, from those who have used it, is very efficient. The idea, however, is not new. So long ago as the year 1813, the silver medal was awarded at the Society of Arts to Mr J. Whitford of St Bartholomew's Hospital, for the invention of a somewhat similar apparatus for the same purpose. In Mr Whitford's apparatus the exhaustion was effected by a syringe, which was found to be inconvenient. The use of vulcanised Indian-rubber springs, attached to the pistons, by which efficient suction tubes are economically formed, is a great improvement in M. Alexandre's apparatus.—*Phar. Jour.*, February 1849.

LONDON: JOHN CHURCHILL, PRINCES STREET, SOHO.
EDINBURGH: SUTHERLAND AND KNOX, 23, GEORGE STREET.
FANNIN AND CO., DUBLIN; J. B. BAILLIERE, PARIS;
AND ALL BOOKSELLERS.

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

AUGUST, 1849.

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I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

231.—*Bowman on the Eye—continued.*—The difference of opinion regarding the nature of the tissue of the *iris*, resolves itself into the question of the definition of the term "muscular." It is enough that its essential tissue is fibrous, and that these fibres are contractile, and the information we desire is with regard to the characters and arrangement of these fibres. Mr Bowman finds that they are allied to, but not identical with, those of the unstriped variety of muscular fibre. They radiate inwards, forming about forty prominent lines on the front, to within one-tenth of an inch from the pupil. There is then a lateral plexiform union; and lastly a very narrow circle of fibres radiating to the pupillary margin. Contrary to the belief of some excellent anatomists, he does not admit the existence, as the usual condition, of a circularly arranged series of fibres towards the pupil; but thinks that the plexiform arrangement described, may serve the purpose attributed to the so called "sphincter pupillæ."

Ciliary Muscle.—This greyish-white circle, which is usually, in whole or in part, called the ciliary ligament, and regarded as serving to unite the sclerotic, the ciliary processes of the choroid, and the iris, is satisfactorily proved by Mr Bowman to be muscular in its nature, as had been previously conjectured by various observers. Its fibres correspond to those of the unstriped muscle. They arise chiefly from the plexiform tissue from the margin of the posterior elastic lamina of the cornea, and radiate backwards in layers to be attached to the ciliary processes of the choroid. When this muscle acts, it will draw upon the ciliary processes of the choroid, and, through them, upon the vitreous humour and lens, so as, chiefly by advancing the latter, to adapt the eye for the vision of near objects. It is thus associated in action—as in nervous supply and by origin of fibres—with the iris, as the contraction of the pupil is likewise required for this purpose.

Microscopical observers are not entirely agreed regarding the so-called

membrane of the aqueous humour, the existence of which anatomists have usually regarded as problematical. The delicate layer on the back of the iris noticed by Dr Jacob, is evidently the layer of pigment cells, or epithelial cells containing pigment, described by Mr Bowman as continued to the iris from the surface of the ciliary processes of the choroid. All observers agree as to the existence of a single layer of flattened cells on the back of the cornea, arranged as on the surface of serous membranes; but, although Valentin has described a layer of cells on both surfaces of the iris, Mr Bowman, with Henle, cannot find them either there or on the front of the capsule of the lens. He, therefore, concludes, that "it seems incorrect to speak of the chambers of the eye as lined by a serous membrane, or of the aqueous humour as contained within a proper capsule; and I suppose that practictioners must abandon the *name*, at least, of that affection, which is now generally termed *aquo-capsulitis*, even if they continue to regard it as a distinct disease."

We next notice his observations on the capsule of the lens and its connections with the ciliary processes.

The anterior hemisphere of the capsule is thicker than the posterior, according to Mr Bowman, by from four to six times; and the thickness of the anterior wall he finds to diminish suddenly where it is joined by the anterior boundary of the canal of Petit.

Regarding the nature of the connection between the ciliary body or processes of the choroid, the vitreous, and the capsule of the lens, much has been written; and the inquiry is an interesting one, as connected with the influence of the ciliary muscle on the lens. It is usual to regard the hyaloid membrane, enclosing the vitreous humour, as coming into relation with the ciliary processes of the choroid at their posterior margin (ora serrata), where the true retina ceases, and as adhering to them; whilst, from this point to near the lens, it is thrown into elevations and depressions which fit in and correspond to the ciliary processes of the choroid. These are the ciliary processes of the hyaloid membrane. The latter membrane is now regarded as splitting into two at a distance of a line or little more from the lens, the posterior coming into contact with the capsule at a short distance behind its rim, the anterior as joining it at its margin; and the space between these two layers and the circumference of the capsule, is the canal of Petit. There is evidently a ligamentous structure between the ciliary processes of the choroid and the hyaloid membrane. This has been variously held to be merely a thickened and plaited part of the hyaloid membrane, a continuation of the retina (its vascular elements) on towards the lens, or a special structure; and this, together with its continuation to the capsule, is the "orbiculus capsulo-ciliaris" of Ammon, and the "*suspensory ligament of the lens*" of Retzius. Under the latter name, Mr Bowman describes it as consisting, externally, of a milky looking membrane, closely lining the ciliary processes of the choroid, continuous behind at the ora serrata with the retina, but clearly not nervous in structure, and thinning gradually towards the tips of the ciliary processes; and internally, or behind, of an elastic or transparent fibro-membranous structure derived from the whole inner surface of the first, and extending to the capsule of the lens. The latter is the proper suspensory ligament. Between the tips of the ciliary processes and the capsule, it lies between the canal of Petit and the posterior aqueous chamber; and Mr Bowman describes it as joining the capsule not at its rim, but a short distance in front of it; and it is here that the sudden diminution in the thickness of the capsule occurs, the two structures becoming continuous with each other. Mr Bowman believes that no blood-vessels pass into the vitreous body or the lens and its capsule, their nourishment being carried on by imbibition from the vessels of the retina, but more especially those of the ciliary processes. The single layer of polygonal nucleated cells which lie immediately within the capsule of the lens, are connected, no doubt, with the nutritive changes of the crystalline, and they also establish an adhesion between the latter and its capsule. They occupy the position of the so-called "Aqua Morgagni." Although that anatomist did not describe a fluid as existing naturally in this situation, such a belief has, nevertheless, become very common, notwithstanding that it has often been pointed out that the existence of a fluid between the lens and its capsule is a post-mortem change, or a rare morbid condition in the human eye. Indeed, that there is naturally an adhesion between the lens and its capsule, may be proved, as shown by Dr Jacob, by the experiment, on a perfectly fresh eye, of removing more than a half of the capsule, and then attempting to raise the lens by a needle, when the adhesion is sufficient to sustain the dragging about of the posterior part of the eye.

The Retina.—Mr Bowman's account of the structure of this membrane seems to

agree generally with that of Hannover, to which he refers. Between the hyaloid and retina is placed a single layer of large transparent rounded cells; and, from within outwards, the following parts are presented in the retina. 1. Grey anastomosing fibres, radiating on all sides from the entrance of the optic nerve, being a continuation of its nerve tubules. As these pierce the sclerotic they lose the thick white coating which gives to them, under the microscope, the double dark outline; but the contained neurine, or central fibre, continues on, and forms this layer of the retina. 2. Grey nervous matter, composed of a granular matrix, containing nucleated nervous vesicles, and similar to the grey matter on the surface of the convolutions of the brain. 3. In connection with the last layer, caudate nucleated globules, which are difficult to distinguish, and which Mr B. was the first to point out. These cells are similar to those found in the ganglia, spinal cord, and some parts of the brain, and are now known to give origin by their processes to nerve tubes, the grey fibre soon acquiring its tubular coating. Blood-vessels are distributed among the preceding elements only. 4. A layer, embracing one-fourth or one-fifth of the thickness of the retina, composed of globules or granules, lying close together, with a very little intervening granular matter, and allied to the nuclei of cells, such as are met with in some parts of the brain. These are the elements common to the retina with the other parts of the nervous system, the rest are peculiar to the retina, and constitute Jacob's membrane. They are, 5, a series of rods or columnar particles, forming the whole thickness of Jacob's membrane, placed close together, their inner ends resting on the granular layer, and their outer extremities being in contact with the lining membrane of the choroid, in the cells of which the pigment is chiefly contained. These are more than one-half longer, and, therefore, Jacob's membrane is thicker at the back than at the fore part of the retina. 6. Bulbous particles, scattered among the rods towards their internal extremities. In man these are oval, with occasional spur-like processes turned outwards; but in some animals they are more numerous and remarkable, as they lie among the rods.

We have here a complete refutation of the still not uncommon view as to the layer of Jacob being a double serous membrane, in opposition to the opinion of its discoverer; but this membrane has not been, until lately, regarded as a part of the retina proper. It would be premature to speculate as yet on the relative uses or importance of these several layers, but it can scarcely be doubted that the elements of Jacob's membrane, and the granular layer next within it, are connected with the reception of impressions, as well as the internal and more directly "nervous" layer. The retina must be regarded as something more than a mere expansion of the optic nerves, for the purpose of receiving the luminous impressions; the optic nerves being, as it were, commissural between them and the sensory ganglia of the brain; although there can likewise be no doubt that, without this central connection and integrity of the nerves, there can be no visual sensation.

It remains for us now to notice Mr Bowman's observations regarding the point of entrance of the optic nerve, and the yellow spot and central foramen of Sœmmering. The phenomena in connection with these have occasioned some perplexity, and are so far enigmatical that, over the first, where the nerve enters, there is no vision; whereas, at the former, where the retina is usually believed to be, at least, partially deficient, vision is the most acute.

With regard to the point of entrance of the optic nerve, it follows, as here the grey fibres are but beginning to diverge, that the other layers are absent, that, in fact, as Mr Bowman observes, there is here no retina proper; and we have thus afforded at once an explanation of the well-known fact of the complete blindness of this spot, and a proof that the outer layers of the retina are essential to its visual power.

The yellow spot—situated one-eighth of an inch to the outside of the entrance of the optic nerve, being from 1-5th to 1-12th of an inch in diameter, and occupying the exact axis of the eye—presents in its centre a small hole, partially concealed by a fold which approaches it from the entrance of the nerve. This fold Mr B. believes to be a post-mortem result, but his grounds for this belief do not satisfy us as being sufficient to set aside the contrary opinion of Dr Jacob, formed from very careful observation of recent eyes; and the account given by Dr Knox of the appearances presented by a similar fold in quadrumanous animals and certain reptiles, in which he discovered the presence of the yellow spot and foramen, seems to render it pretty certain that there is naturally a fold of the retina in this situation, by which the perforation is either completely or partially overlapped. From Dr Jacob's observations, it would appear, that the foramen does not involve

the whole thickness of the retina, and that his membrane covers it behind. Mr Bowman also finds this membrane to be continued behind the yellow spot, and further, that there is there a considerable modification of the other retinal layers. That the grey fibres are fewer in number, and those stretching forwards from the optic nerve pass round and avoid the spot, so that those only approach which properly belong to it. The vesicular nervous matters, including the caudate cells, are much more abundant, and the outer granular layer exists, with only a slight modification. The yellow colour of the spot seems to be diffused through all these elements, though here and there in minute grains of deeper hue, still not lying in proper pigment cells, but staining fibres, vesicles, and granules, alike, with the exception of Jacob's membrane, which does not partake of the yellow tinge. The arteries and veins, as is known, avoid this spot, which has, therefore, only its own capillaries; but this arrangement of the blood-vessels is said also to occur here in animals which have no yellow spot.

Instead, then, of a deficiency of the retina at this part, it would appear that there is here a more highly and delicately organised portion of it, consisting this small perforation, and occupying the axis of the eye, at, and close around which, there is a well known exaltation of the function of the retina. The meaning of the perforation, however, still remains unexplained. The theory of some, that it is an analogous condition to the fissure in the retina of birds, through which the dark pecten passes from the choroid into the vitreous humour, has been supported by arguments derived from comparative anatomy and development; but this view scarcely accords with the circumstance of the absence of the spot and foramen in nearly all quadrupeds. The latter fact also points out to us that the spot and foramen are not essential to the constitution of a perfect retina; although, at the same time, it may be remarked that the relation between the two eyes in animals, which again varies in different classes and genera, is very different from that which obtains between them in man, with reference to their motions and to single vision with two eyes.

II.—MORBID ANATOMY, PATHOLOGY, AND PATHOLOGICAL CHEMISTRY.

232.—*On the Blood in Purpura.* By Dr PARKES.—Dr Parkes has recently published two cases of purpura, which occurred in University College Hospital, and given analyses of the blood. The following are the results of his analysis.

	A man aged 23.	A woman aged 18.
Water, . . .	799·03	819·40
Solid Residue, .	200·97	180·60
	1000·00	1000·00
Blood-corpuscles, .	119·611	93·66
Fibrin, . . .	2·088	5·00
Albumen, . .	67·103	75·31
Extractive Matters,	5·304	
Salts of the Serum,	6·864	6·63
Consisting of		
Chloride of Iodine,	2·938	2·530
Chloride of Potassium,	·811	
Phosphate of Soda,	·625	1·088
Sulphate of Soda, .	·363	
Peroxide of Iron, .	1·296	·602
Lime, ...	·077	·080 or less.

The most important points in the first analysis seem to be, *first*, that there is a general lowering of the solid constituents of the blood; *second*, that the relative proportion of the organic materials to each other seems preserved; and *third*, that the most striking alteration in the inorganic compounds, consists in a marked increase in the quantity of iron.

The urine was of high specific gravity, and carried off a larger amount of solids than was normal.

The treatment consisted in the administration of ten grains of nitrate of potash thrice daily, and the use of animal food. He was dismissed cured in one week.

In the second case, the chief point of interest was the great increase of fibrin. As neither inflammation nor rheumatism were present, it seemed difficult at first sight to understand why there should be this increase in this case and not in the former. The difficulty was however completely explained by the progress of the case. In other respects the analysis agreed. The solid contents generally were lowered. Bequerel's average for healthy women is 208·1; and thus relatively the corpuscles would be nearly 104 in 1000 parts of blood, which is quite within the limits of health. The organic constituents in this case, as in the former, preserve their natural relation to one another, with the exception of the fibrin. The most marked change in the inorganic con-

stituents is also in the increase of the iron. With only 95 of blood-corpuscles, it should have been reduced to about ·4, whereas it has amounted to ·602 in the 1000 parts. The potash was normal, and as the patient had taken none as medicine, it is obvious that the appearance of purpura is not connected with a deficiency of this alkali in the blood.

This patient entered the hospital on the 7th of August. She was bled on the following day; on the 14th an attack of articular rheumatism commenced, which was doubtless connected with the excess of fibrin, found on the 8th. On the 26th, she left the hospital cured, both of the purpura and the rheumatism. The augmentation of the fibrin so long before any local manifestation is worthy of notice.

In all the cases that Dr Parkes has observed at University College Hospital, there has been deficiency in the quantity and want of variety in the food, but from the close analogy between this disease and *morbus maculosus werlhofii* (which he has seen in soldiers in India, who had been well nourished, and who were unavailingly treated with tonics, generous diet, and fresh vegetables, but were cured both by turpentine and by creosote), he thinks that there is some other cause beyond dietetic errors.—*London Med. Gaz.*, Nov. 1848.

233.—*Oxalic Acid in the Blood in Disease.* By Dr Garrod, Assistant Physician to University College Hospital.—In a specimen of blood which contained a large impregnation of urea, Dr Garrod, in the course of a search for uric acid, discovered a large amount of oxalic acid, in the form of dumb-bell and octohedral crystals of oxalate of lime. He has since discovered traces of this acid in four other cases. The symptoms which the first patient, in whom it was abundant, laboured, were constant hiccup or eructation, œdema of the face and extremities, ascites, together with a frequent, but not constant impregnation of the urine with albumen. The only remarkable post-mortem appearance was in the kidneys, "which were found to be coarse in texture, and the tubules of the cortical substance filled with a white plaster-like matter (urate of soda)."—*Med. Times*, 4th July 1848.

[In examining the blood of a cholera patient for urea, Dr W. Robertson informs us that he obtained crystals, apparently of oxalate of lime, from the spirit extract, after treating it with nitric acid. These, however, were probably the result of decomposition of some organic compound. We hope that the details of Dr Garrod's observations will be laid before the public. It is difficult to conceive of oxalate of lime existing as such in the circulation.]

234.—*On the Simultaneous Development of Variola and Vaccinia.* By MM. Herard and Bousquet.—M. Herard having had at the Children's Hospital of Paris (where children are so wantonly exposed to the danger of contracting smallpox prior to their vaccination) the opportunity of observing 18 cases of the co-existence of the two diseases, he is desirous of expressing his opinion upon the disputed question as to the degree of influence they exert upon each other.

Of these 18 children (from twenty months to four years old) 7 died; all these being, however, cachectic or exhausted by prior disease. In them the smallpox was rarely confluent, but it was irregular and ill developed. In the 11 cases which recovered, the eruption was discrete, rapid in its course, and unaccompanied by suppuration of the pustules, or tumefaction of the surrounding skin. The fever was slight, and the convalescence rapid. During this benign progress of these cases, the disease more than once proved very fatal to non-vaccinated children. Had the vaccine acted injuriously in the seven children who died? MM. Rilliet, Barthez, and Legendre answer this question in the affirmative, believing the vaccination hastens the evolution of the variola, and increases the debility—opinions with which M. Herard does not agree. He also in the 11 successful cases, observed no difference produced in the mode of the development of the vaccine vesicle; but in the 7 children who died from various complications, the vaccine pock was in a very languishing condition. The following are the general conclusions arrived at:—1. When the two eruptions are developed at the same time in a healthy child, the variola is advantageously modified. Its progress is more rapid, and the eruption is more discrete—taking on the character of varioloid. 2. Although vaccination is far from exerting the same effect, and especially in hospitals, on very young and diseased children, being innocent, it should be practised. The danger in these cases is attributable to the smallpox, not to the vaccination, and is produced by complications and bad hygienic conditions. 3. It is not correct to say that the two eruptions exert a reciprocal modification. That which has the priority of invasion (not of infection) influences the other, but is not influenced by it; and as, in almost all cases, the vac-

cine, to become developed, must precede the variola, we may generally state that in the cases where the diseases exist simultaneously, the vaccinia undergoes no modification.—*L'Union Médicale*, Nos. 108, 109, 110; and *Med. Chir. Review*, April 1849.

235.—*Elephantiasis.* By Dr Bellingham.—At a meeting of the Surgical Society of Ireland, Dr Bellingham read a paper on Elephantiasis, and brought forward cases to show that this diseased state is simply an hypertrophied and altered condition of the skin, and subcutaneous cellular tissue, the result of repeated attacks of erysipelas in the part. The paper is a very interesting one, but it is too long for insertion. The conclusions Dr B. arrives at are, *first*, "That the hypertrophied condition of the skin and sub-cutaneous cellular tissue of the lower extremities, which is not unfrequently observed in this country, and gets the name of Elephantiasis, is identical with the disease, which in tropical climates has been variously termed "Barbadoes Leg," "Glandular disease of Barbadoes," "Cochin Leg," and "Galle Leg." *Second*, "That this diseased condition of the lower extremities is not the result of inflammation of the lymphatic glands or absorbent vessels, as supposed by the majority of writers; if these parts do become engaged, they are only secondarily or sympathetically affected. Neither is it the result of inflammation or obstruction in the venous system of the limb, as supposed by others."

Thirdly, "That the diseased state of the lower extremities, familiar to us as Elephantiasis, is nothing more than an hypertrophied and altered condition of the skin, and subjacent cellular tissue, the result of repeated attacks of erysipelas in the part."

With respect to the treatment, Dr Bellingham says, "It is obvious that it is only in the early stage of the disease that treatment can prove effectual in preventing deformity. But even in the further advanced stage, treatment may still do much for its prevention. By methodical bandaging, we may diminish or remove the tumefaction of the limb, which remains after each attack; and by appropriate measures we may prevent, or at least retard, the supervention of the attacks of erysipelas."—*Dublin Med. Press*, December 13, 1848.

III.—PRACTICE OF MEDICINE.

236.—*Effects of Bloodletting and Mercury in Pericarditis.* By John Taylor, M.D., Fellow of the Royal College of Physicians in London, and Physician to the Huddersfield Infirmary.—In this communication the author has analysed the forty cases of pericarditis, published in the *Lancet* in 1845 and 1846, in respect to the treatment of the disease.

The cases are divided into two classes:—1. Those occurring in connection with acute rheumatism, the subjects of which were previously in good health; and 2. The cases occurring in connection with renal disease, or in persons in a previously bad state of health.

The patients in the first class, besides being in good health, were younger, and suffered from much fewer complications than those in the second class. Very few of those in the first class died, whereas all died in the second class. The conclusion from these facts is, that the age and previous health of the patients, and the nature of the complicating diseases, have more influence upon the favourable or unfavourable termination of pericarditis than any difference in the treatment.

The remedies whose effects are examined are chiefly blood-letting and mercury.

I.—Bloodletting.

The conclusions arrived at are the following:—

1. The duration of pericarditis increases in proportion as the time is longer between the commencement of the disease and the first bleeding.

2. The duration of the cases bled after the first four days is greater by one-half than that of those bled within the first four days from the invasion of the disease.

3. The influence of bleeding was more marked in the cases in which it was copiously and repeatedly, as well as early, practised, than in those in which blood was drawn less frequently and more sparingly.

4. Pericarditis is never extinguished at once by bleeding, however early or however copiously practised.

5. In several cases the pericarditis was suspended for a limited time. The suspension in every instance was immediately consequent upon the local abstraction of blood.

6. It is probable that renal has a longer duration than rheumatic pericarditis.

7. Bloodletting must be less copious, and is more frequently inadmissible, in renal than in rheumatic pericarditis.

8. Bloodletting probably lessens the mortality, inasmuch as it lessens the duration of pericarditis; but direct proof of the reduction of mortality is not to be obtained from these cases.

9. The abstraction of blood by venesection, cupping, or leeches, almost invariably relieved the pain at once, but not permanently. There is no reason to believe that any one form of bleeding relieves pain more effectually than another.

10. Bloodletting never lessened the frequency of the pulse, except when there were signs of the inflammation having abated.

11. The tendency to syncope in some cases of pericarditis renders it necessary to be very careful in abstracting blood by venesection.

12. Free venesection for pericarditis does not always prevent the subsequent appearance of serious inflammation in other internal organs.

II.—Mercury.

1. The cases in which mercury was given within the first four days had an average duration less by five days than those in which it was given later.

2. The cases in which salivation was produced within the first four days had an average duration less by two days than those in which it occurred later.

3. It is difficult to determine how much of the benefit was due to the mercury, because all the patients who took mercury were likewise bled, and in almost every instance the two remedies were first employed on the same day.

4. The author is inclined to the conclusion that the benefit was due in greater measure to the bleeding than to the mercury, partly because the duration of the disease was more abbreviated in those who simply began to take mercury than in those in whom salivation was produced within the first four days. The administration of mercury coincided with the bleeding, but the salivation did not, and the results are just what might be looked for upon the supposition that the benefit was due to the bleeding and not to the mercury.

5. If the production of salivation had anything like the marked influence in arresting inflammation, and in promoting the removal of its products, which it is currently believed to possess, the duration of the cases of pericarditis after salivation ought to have been much less than it really was. This is proved by a detail of the cases.

(a) Salivation was not followed by any speedy abatement of pericarditis in sixteen cases.

(b) Salivation was followed by pericarditis in five cases.

(c) Salivation was followed by an increase in the extent and intensity of the pericarditis in three cases.

(d) Friction sound ceased two days before the mouth became sore in two cases.

(e) Salivation was followed by a speedy *diminution* of the friction sound in two cases; it did not cease, however, for some days after.

(f) The pericarditis ceased soon after salivation in two cases. In one of them, however, it had been declining for some days before.

(g) Mercury was given, but no salivation was produced, in seven cases.

(h) No mercury was given, nor other treatment adopted, in eight cases.

(i) Cases are detailed exhibiting the occurrence of various internal inflammations during the time that salivation was proceeding. The cases comprise examples of endocarditis, pleuro-pneumonia, pneumonia, pleuritis, erysipelas, and rheumatism.—Royal Medical and Chirurgical Society, in *Med. Times*, July 14, 1849.

237.—*On Enlargement of the Spleen in Children.* By Dr Battersby.—Enlargement of the spleen is commonly supposed to be peculiar to adult life, but the author has observed it seven times in children. In these cases it seemed to be the effect of a too prolonged lactation, the average duration of suckling being in the cases referred to nineteen months. The disease proved fatal to three of the children. The symptoms of this affection are much the same in children as in adults.

"When the spleen has been long affected," Piorry observes, "the skin exhibits a dull aspect; a greyish coloration presenting sufficiently well a light-coloured creole shade, but with colours less warm and more ashy. It is the integuments of the face especially where this colorisation is most remarkable. It is not the yellow ochrey colour of icterus, nor yet the discoloration of chlorosis; it is a shade quite special, which has been very ridiculously called *bluish icterus*. Constantly, when this splenic tint is present, the sclerotic presents a dull *bluish white* under the conjunctiva." The conjunctiva is bloodless, and the patients manifest a perfect indifferance to everything around them. They have a sickly pallid look, and the wasting of the body is not in proportion to the paleness; they are truly chlorotic; they have invariably

pica; the bowels are generally irregular; the abdomen is full. The patient's bulk will remain pretty good for a long time, although he will become blanched in a state of anæmia. The blood is not proper in quality; it is deficient in fibrine, and likewise in red particles. The peritonæum sometimes becomes affected, and produces ascites, which renders the detection of the spleen difficult. The diagnosis is generally very easy long before the spleen has attained a large size. The heart is unaffected. It has been said that the spleen is often hypertrophied in scrofula and rickets. This, however, is by no means an established fact; and when there is tumefaction of this organ there is no peculiarity about it, and the other viscera, especially the liver, are simultaneously engaged.—*Dublin Jour.*, May 1849.

238.—*On Pica in Children.* By Dr BATTERSBY.—Dr B. has noticed an occurrence of which he can find, with regard to children, no observation in works treating of their diseases. This is pica, or an appetite for substances which are not food. It is known to affect pregnant women and chlorotic girls.

Dr B. thinks that, in children, pica depends probably on an altered sensibility of the nerves, and acid state of the secretions of the stomach, the consequence of their being fed on depraved milk, or irregularly. As a general rule, this is one evidence of undue lactation, for of fourteen cases in which he noted it, the average duration of suckling was twenty months; six of those cases were suckled two years and upwards; and one, weaned at one year, was continued at the breast for seven months during the utero-gestation of a succeeding child. Of the fourteen examples, seven were cases of hepatitis. The children eat greedily of coals, cinders, ashes, lime off the walls, dirt, paper, and even their own ordure. They are very delicate and wasted; their complexion is sallow, anemic, and waxy; and the abdomen is enlarged. The bowels are generally too free; the stools are of all colours—green, yellow, black, or white. *Dublin Jour.*, May 1849.

239.—*Symptoms of Partial Chorea.* By Dr TODD (Lumleian Lectures for 1849).—1. The affection is not symmetrical—that is to say, one side of the body is more frequently affected than both; or if both should be affected, one is always much more so than the other. In general, this difference of affection of one side remains with that side, whichever it may be; but in rare instances there is a disposition to shift, and for two or three days the right side will be chiefly affected, and then for a longer or shorter period the left side will exhibit the most active movements. This tendency to shift calls to mind a prominent feature of certain rheumatic and gouty affections.

2. Of all the movements which accompany chorea, that of the tongue is the most peculiar and characteristic; indeed I would call it pathognomonic. The patient protrudes the tongue, with a peculiar thrust, to the fullest extent of which it will admit; frequently this is done by one effort, at other times it requires two or three attempts before it can be accomplished. And the subsequent retraction is also peculiar: the tongue is drawn back, supported and guided by the pressure of the teeth, and often very slowly and with great caution. Sometimes this peculiar mode of protrusion of the tongue is the precursor of the other choreic symptoms; and if we had frequent opportunities of seeing the cases very early, I have no doubt that this symptom would be found more frequently the harbinger of the more extensive affection. I have from this symptom only been able to predict with accuracy that an attack of chorea was coming on.

3. The choreic convulsion is frequently succeeded by a paralytic state of the limbs previously convulsed; the convulsive movements cease, and the limbs remain paralysed; the paralysis is seldom complete, although considerable. When the choreic convulsion has affected one side, the paralysis will likewise affect the same side; it will be *hemiplegic*, and will resemble very closely hemiplegia from diseased brain, for which it is very apt to be mistaken by those not aware of this fact. Not long ago a boy was brought to my house for me to advise whether the hemiplegic paralysis under which he suffered should be treated by antiphlogistic means, such as mercury, &c. I soon discovered that the case was one of choreic paralysis, and advised steel and shower baths, and exercise of the limbs, under which he rapidly recovered. In a very few instances paralysis *precedes* the choreic convulsion; but so far as my observation informs me, it is then accompanied by the peculiar thrust of the tongue; by this sign I have been enabled to distinguish it. That paralysis may occur in this way is evidently a fact of the highest practical interest, whilst it is not devoid of importance as bearing upon the pathology of the disease. Nevertheless I do not find it noticed in any of the descriptions of the disease in the practical works which I have consult-

edy. This previous history of the case, the absence of any other symptom referable to the head, and the gradual mode of invasion of the paralysis, in addition to the peculiar mode of protrusion of the tongue, will assemble the careful practitioner to distinguish this paralysis from that caused by cerebral lesion.

4. The heart is very frequently morbidly affected in chorea; and this morbid affection shows itself, not in any disturbance of *the rhythm* of the heart, which, so far as my observation extends, never is disturbed, but in a derangement of its sounds. A bellows-sound is frequently present, and is either aortic systolic, when it is almost always an accompaniment of the anæmic state of the patient, or *much more frequently* it is *mitral systolic* or *regurgitant*. I am surprised that this feature of the clinical history of chorea has not attracted more general attention. It has been well known to me for many years, and I described it in the Croonian lectures on the pathology of rheumatism, which were given by me in this theatre six years ago. But to my friend, Dr Addison of Guy's Hospital, is due, so far as I know, the merit of having first made public the frequent occurrence of this bellows-sound in chorea. What is the cause of this sound? is it due to any irregularity in the muscular action of the heart? a choreic state of that, as of the external muscles, whereby the action of the valves is disturbed? or is it caused by a morbid deposit on the mitral valves, which prevents their precise action? or can it, like the aortic sound, depend on the anæmic state of the patient? I shall answer the last question first. The closure of the mitral valves is the result of the mechanical accumulation of fluid in the ventricle, which presses the valves towards the auricle, their tension being maintained by the chordæ tendineæ—this effect will be produced no matter what may be the nature of the compressing fluid; a mere colourless state of the blood cannot produce mitral regurgitant bellows-sound; some imperfection, either of the valves themselves, or of their mode of apposition, must exist in order to produce such a phenomenon. It is plain, then, that the bellows-sound must be caused by some disturbance in the action of the mitral valves. What, then, produces the valvular derangement? Can it be any disturbance of the muscular action of the heart? any choreic state of the musculi papillares? I apprehend not; for as the closure of the valves is not accomplished by the action of the muscles, it would not be affected by any such irregular muscular action. Moreover, no such choreic state of the heart's action could take place without its being indicated by a disturbance of the heart's rhythm, which, of course, would be very readily detected. Hence, then, we cannot resist the conclusion, that the mitral bellows-sound in these cases is due to such an organic lesion as prevents the complete closure of the mitral valves during the systolic effort of the heart. But now we are met with another question not less important. What can have created this morbid state of the mitral valves? It is rare to meet any symptom of heart affection, either preceding or accompanying the chorea; and the valvular imperfection is often overlooked, and only discovered by careful auscultation of the heart's sounds. The true answer to this question is, I believe, to be found in the fact that many of the patients who suffer from chorea are of a rheumatic diathesis, and that in consequence of this rheumatic state they experience an insidious endocarditis which generally affects the mitral valves. The proof that rheumatic diathesis and chorea are frequently met together, is derived from these facts—that many of the sufferers from the latter malady, when carefully examined, are found to have previously suffered more or less from chronic articular pains, to have sprung from rheumatic or gouty parents, and to exhibit deranged secretions, such as occur in rheumatic states. I have seen many instances of choreic children passing urine of high specific gravity loaded with lithates, and sometimes precipitating lithic acid in very notable quantity, and for a considerable time. Choreic patients often suffer from rheumatic fever; and, as the subjects of that fever are very liable to its recurrence, so a child who has once had chorea is apt to have it again and again.—*Med. Gazette*, May 1849.

240.—*Peculiar Forms of Choreic Affections.* By D. Todd.—There is a curious affection, of which I have met with two examples in my own practice, and of which five or six have been recorded by Albers of Bremen. The prominent feature of it is the inability to hold a pen or to write for any time. The patient begins to write—writes two or three words, when the hand forthwith is spasmodically extended, the fingers cease to be controllable, the pen falls away from them. If the patient attempt to control his pen-hand with the other hand, or if any one else does it for him, the movements become worse, and he suffers excessive pain up the arm; yet all other actions are well done, and the

power of the hand to grasp is good. One gentleman thus affected is a man of considerable mental endowments, and he has found it so impossible to overcome the irregular movements of his hand, that he has trained himself to write with his left hand, which he can now do with such facility that he can carry on an extensive correspondence. There can be no doubt that the impairment of speech, which is sometimes a forerunner of cerebral mischief, and which ought always to be regarded as a warning of such an invasion, is of this character. Emotional excitement will cause hesitation of speech in many healthy persons; many can do certain things very well if allowed to take their own time, but if hurried and flurried they are apt to bungle about them very seriously. In one instance I found well-marked choreic convulsions of the right arm, with disturbed intellect, and gangrene of the toes, associated with extensive colourless softening of the left cerebral hemisphere, involving the optic thalamus. Allied to the movements of chorea are the fidgets of children, and, perhaps, also those of grown persons. In some children these fidgetty movements are so excessive, that the child becomes almost a nuisance in a room. All the muscles are affected; the child incessantly makes grimaces of the most various kinds, every minute he assumes a new attitude; if anything comes in his way he must handle or touch it; and these irregularities are always the greater when there is derangement of general health. Children thus affected might readily be thrown into the convulsions of chorea by a strong mental emotion.—*Med. Gazette*, May 1849.

241. — *On the Catarrh of the Mouth.* By Dr PFEUFER.—Dr Pfeufer opposes the prevalent idea, that the appearances of the tongue indicate the state of the stomach, and that its loaded state or perverted sensibility shows the existence of gastric affection. He denies that it undergoes greater changes in the diseases of the stomach than in those of any other part of the body. The stomach may be most extensively diseased by cancer, in which affection congestion and catarrh of the mucous coat is never absent, and yet the tongue continue clean and the appetite good, as also may be the case in chronic inflammation of the organ. The tongue may be loaded, and the appetite lost, in that catarrhal state of the mucous membrance of the stomach termed *gastricismus*, but it is by no means rare to find this not the case. The appetite may be gone, and the tongue be quite clean.

On the other hand, changes may occur in the cavity of the mouth without being at all indicative of disease of the stomach; the tongue may be thick and loaded, an indifference to food exist, and the taste be blunted and pasty, yet whatever the person does take produces no gastric suffering. The affection is, in fact, a *catarrh of the cavity of the mouth*. It may come on quite suddenly under the influence of mental emotion; it accompanies a variety of affections of the mouth and throat, and may be excited by various stimulating articles of diet, or by medicines acting as local irritants. It sometimes passes away in a few hours, and at others lasts for days, and seldom requires treatment, and certainly not the use of emetics and purgatives, which are usually resorted to, the diligent rinsing the mouth with cold water hastening its removal. Occasionally, however, the affection lasts for weeks or months, and then is usually treated by a great variety of medicines as an obstinate dyspepsia; those who can afford it being at last sent to the Spas. These means, proper enough in catarrh of the stomach, are here useless; and with a gargle, composed of a grain or two of corrosive sublimate in a pound of water, the author has several times cured in a few days a disease that had resisted the long train of anti-dyspeptic medication for months. Local sources of irritation, too, must be sought; for it has more than once happened to Dr Pfeufer to relieve cases, by the removal of some sharp fragments of a tooth, which had been subjected to all the approved modes of treating *gastricismus*, and had resisted these, as well as long courses of mineral waters, and the like. An acute form is also sometimes very obstinate, recurring again and again, and giving rise to loss of appetite. It is often very analogous to nasal catarrh, with which it is sometimes conjoined, and then the affection of the mucous membrane is primary. In other cases, however, and especially when produced by mental emotion, and when it is so often erroneously attributed to "bile," there is apparently a primary affection of the nerves of taste and sensation of the tongue, and then the catarrhal secretion is secondary.—*Henle and Pfeufer's Zeitschrift*, Band vii. 180, and *Med.-Chir. Rev.*, July 1849.

242.—*On Protrusion of the Eyes in connection with Anæmia, Palpitation, and Goitre.* By Mr W. WHITE COOPER.—*Cases of Goitre.* By Dr S. SCOTT ALISON.—[The publication, in our February Number, of the remarkable observations of Dr Begbie, on the connection of anæmia

with goitre, protruded eyeball, and symptoms of cardiac derangement, has called forth five illustrative cases from Mr Cooper. Dr Alison's observations also tend to confirm Dr Begbie's views, inasmuch as in two of his five cases of goitre, anæmia existed in marked degree]. Of Mr Cooper's five cases, four were females, and Dr Alison's four cases of goitre were all females. In three of the former series of cases, there had existed derangement of the catamenia, but this consisted in a scanty or altogether suppressed discharge, and not, as in some of the earlier cases described, in an increased flow. No allusion is made in Mr Cooper's cases to any previously existing cause, sufficient to account for the first occurrence of the anæmia. In Dr Begbie's cases menorrhagia and wasting hemorrhage from piles, evidently operated as the exciting causes. With this exception, the cases of Mr Cooper are identical with those of Dr Begbie; the same train of symptoms are manifested, and all appear easily referable to the same pathological condition.

A different explanation, however, has been offered by Mr Cooper in regard to the phenomena presented by the eyeballs. He considers it a simple protrusion, and not a dropsical enlargement, and mentions an explanation of the manner in which this protrusion is caused, as suggested by Mr Dalrymple; the latter believes it to be owing to the operation of two causes, an absence of the proper tonicity of the muscles by which the eyes are retained in their natural position in the orbits, and some amount of venous congestion of the tissues forming the cushion behind the globes.

[This explanation, whether applying or not to Mr Cooper's cases, is, in those recorded by Dr Begbie, inadmissible. That in Dr Begbie's cases true hydrophthalmia existed, there is the testimony of Mr Walker, a most experienced oculist, and both he and Dr Begbie affirm that a positive *enlargement* of the eyeballs existed. Dr Begbie mentions, that vision was not much affected, and the same remark was made by Dr M'Donnell when recording his cases; but though impaired vision is generally considered as a sign or symptom accompanying hydrophthalmia, the exact cause upon which the aqueous effusion depends, will doubtless materially affect the degree in which this symptom exists.]

The treatment of his cases Mr Cooper has conducted with reference to the anæmic condition of the system on which he believes these special symptoms to depend. The most efficacious remedies are iron, aloes, and myrrh, with sedatives, ablution of the body with cold salt and water, followed by friction, and if there be any indications of hysteria, friction along the spine with a stimulating liniment. The application of cold water to the eyes is recommended.

Dr Alison believes goitre to be a local disease, though its rise and progress is favoured by certain general morbid conditions of the system; these general conditions being debility and anæmia. Of treatment Dr Alison speaks of local and constitutional; under the former he recommends pressure, the application of various forms of plasters, of iodine of mercury or ammoniacum, or a combination of these. Under the head of constitutional treatment, when the goitre has been associated with anæmia, the author has prescribed iron, generally the iodide, the valerianate when hysterical symptoms have been prominent. After a time, chalybeates and the mineral acids have been found beneficial. Careful attention to the regimen known to be useful in such cases is enjoined.—*Lancet*, No. 21, vol. i. 1849. *London Journal of Medicine*, No. 6.

IV.—PRACTICE OF SURGERY.

243.—*Treatment for the Cure of Hernia in Infants.* M. Bayard, of Cirey (Haute Marne), after having stated the frequency of umbilical hernia in new born infants, and pointed out the difficulties of keeping the hernia reduced by means of the ordinary bandages, advises the use of the following apparatus:—He takes an oblong piece of cere-cloth, about three fingers' breadth, and twice as long; if it is not sufficiently adhesive, he spreads it over with diachylon. He next takes a small piece of very fine and pliable sponge, nearly as thick as half an almond, and having given it the form of a truncated cone, he fixes its base to the centre of the cere-cloth by means of the diachylon. Then reducing the hernia by the index finger of the left hand, and having warmed the dressing with the right, he applies it quickly, by placing the summit of the cone of sponge on the reduced hernia, and then passing the hand pretty strongly along the cere-cloth, keeping up this light pressure for about a minute to allow the diachylon to attach itself closely. This slight dressing remains, *in situ*, without the aid of compress or bandage, and without any

fear of being deranged by the necessary attention to cleanliness and the other wants of the infant. Its action is to keep the hernia reduced by means of the slight elasticity of the sponge constantly causing a spring. M. B. has never seen the diachylon do any injury to the skin. [Although this means has produced good effects in M. B.'s hands, it is not to be doubted, that the diachylon, although preferable to ordinary bandages, must be very liable to be detached from the skin, either by the movements of the young patient, but more especially from the perspiration which takes place beneath the plaster, if this perspiration be at all abundant. Perhaps this may lead to the trial of, and in case of success, may bring into use, under these circumstances, the adhesive properties of collodion, which he appears not to have thought of.]—*Gazette des Hôpitaux*, 6 *February* 1849.

244.—*Unusual Dislocation at the Shoulder Joint.* M. MALGAIGNE relates a case of unusual dislocation at the shoulder:—François Chauche, 63 years of age, a day-labourer, was admitted into the Hospital of St Louis on the 31st of October 1848. On the 15th August he was thrown from a cart to a great distance, and fell on the tip of his right shoulder; he states that his arm was pressed against his body, but cannot say whether it was carried forwards or backwards. Feeling great pain, and being unable to move his arm, he went to a bone-setter, who applied violent traction, and sent him away with his arm in a sling, saying it was cured. He kept on the bandage eight days, and then tried to move his arm, but in vain, each attempt causing great pain. The pain lessened by degrees, and he could move the arm slightly, but the motion was so confined, that he determined, after two months and a-half, to come to the hospital. The shoulder presented a singular deformity. It was flattened as in ordinary luxations, the finger could be passed into a depression immediately below the acromion, and the glenoid cavity was evidently empty. Moreover, the two corresponding edges of the acromion, as also its anterior angle, could be easily felt; in front of this angle, almost beneath the clavicle, there could be seen and felt a large, hard, and spherical projection, continuous with the shaft of the humerus, obeying all the movements given to that bone, and which evidently was the head of the humerus. On its external surface was the anterior or internal surface of the acromion; on its superior, the inferior surface of the clavicle, and it almost completely filled up the space between these two parts. The projection was so great, that it extended for two inches beyond the anterior surface of the clavicle; and it was so superficial, that at some parts it seemed subcutaneous; at the most prominent part the thickness of the integument and muscles was only one-third of an inch, and a little further inwards only a quarter of an inch. M. Malgaigne's opinion was, that the head of the bone had at this spot separated the deltoid and great pectoral so as to become almost subcutaneous. To satisfy himself, he ordered the patient, while the elbow was pressed against the body, to endeavour to remove his arm, and, accordingly, he felt the borders of the two muscles contract and leave an interval between them of less than an inch where the head of the bone was only covered by skin. It was evident, then, that the head of the humerus had been carried forwards and upwards above the coraco-acromial ligament and coracoid process; this process could not be felt, the head of the bone completely covering it. On the uninjured side it was deeply situated, somewhat more than an inch behind the level of the clavicle. The following measurements are given by M. Malgaigne (the *centimetre* is nearly two-fifths of an English inch):—The clavicle was 17 centimetres long, the most internal part of the dislocated head was 9 centimetres from the sterno-clavicular, and 8 from the acromial articulation. On the left side the clavicle measured a little more than 13 centimetres (?) It was necessary also to examine the disposition of the neighbouring parts. At first sight the arm appeared to be shortened, and, in fact, the head was seen projecting above the top of the acromion. However, by measuring the arm, and also the anterior parietes of the armpit, there was found to be only half a centimetre of shortening. The armpit was quite empty and free, so high that the whole finger could be passed into it. The elbow was not very much drawn out from the body, and a ribbon stretched from the posterior angle of the acromion to the epicondyle was not drawn out from the insertion of the deltoid even a centimetre; while, on the sound side, it was more than one. There was no abnormal rotation. The condyles of the humerus had the same relations as on the sound side, and so also had the shoulder-blade. — *Revue Medico-Chirurgicale de Paris*, Jan. 1849.

245.—*Diseased Prostate Gland.* By DR MAYNE.—DR Mayne presented a recent specimen of diseased prostate gland, taken from the body of a man aged seventy-two, who lately died of dysentery

in the Hospital of the South Union. The prostatic disease, under which he had laboured for a considerable period, was attended by the ordinary symptoms, but towards the close of the case it was marked by the occurrence of some uncommon circumstances, which induced Dr Mayne to lay the specimen before the society. This patient frequently suffered retention of urine, occurring at intervals of three or four weeks, easily relieved by the catheter and again brought on by exposure to cold, by any irregularity of habits, and very often by permitting the bladder to become too much distended; he was in the habit of occasionally absenting himself from the work-house on leave, and was always observed to return suffering from retention. In June last he had gone out, as previously, on leave; he was absent much longer than usual, but when he returned he was not suffering from retention. This excited some curiosity, and being questioned, he acknowledged that, immediately after he had gone out, he was attacked by the complaint, and not wishing to return so soon, he had applied to a medical practitioner, who proceeded to relieve him by introducing a catheter. This he described to have been effected with great difficulty; that blood flowed away before the urine began to be discharged, and that he was directed to retain the instrument in the bladder for some days. The result was, that from that period to his death, an interval of about seven months, he had no return of the complaint. So pleased was he with this, that he used to contrast very unfavourably the medical practice of the hospital with that of the surgeon by whom he said he had been perfectly cured at once.

Upon examination after death, the prostate was found enlarged in all its lobes; the third lobe projected from behind forwards, and a false passage had been effected through it, which had become established as a new portion of the canal for the passage of the urine, which had continued to be discharged by it.—*Dublin Quarterly Journal of Medical Science.*

V.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

246.—*An Account of the "Flemish Twins;" two Infants united by the Anterior Wall of the Abdomen.* By Dr VERHAEGHE, of Ostend.—On the 27th of May last, there was born at Erneghau, a village situate about four leagues from Ostend, a double monster, which, according to the classification of Geoffrey St Hilaire, belongs to the family Monomphalia (*one navel*), and to the genus Xiphopaga (*xiphoid-*[*cartilage*] *swelling*).

It consists of two bodies, which are perfectly distinct, but are united together in that extent of the abdominal parietes comprised between the xiphoid cartilage and the navel. This junction is not formed by a species of band or tie; on the contrary, it consists of an intimate fusion of the abdominal parietes of one infant with those of the other. The xiphoid cartilages are curved forwards and sideways, approaching each other so as to unite by their summits, and form an obtuse angle. The umbilicus is single for the two children, and is situated at the bottom and on the anterior part of the inferior commissure of this junction. The extensibility of the parietes of the belly allows of the children being placed, the one on the right flank, and the other on the left, so that they look obliquely at each other. In consequence of this extension of the abdominal parietes, they can be made to take the appearance of a large band, or of a means of union like that of the Siamese twins.

The most natural position, and that in which the point of junction experiences the least tension, is that in which the two infants are turned face to face and belly to belly; but, as we have just said, the extensibility of the abdominal walls permitting them to lye obliquely, almost side by side, it is in this position that they are habitually found.

This union does not constitute a simple juxta-position, as one might at first be disposed to think; but there is a true and intimate fusion of the epigastric parietes, and very probably (not to say certainly) a communication of the abdominal cavity of the one with that of the other. In point of fact, the seat of the junction is resisting and elastic in all its parts; and percussion gives *everywhere* a very clear tympanic sound,—a fact which proves that beneath the finger which percusses there are hollow viscera filled with gas (either stomach or intestine, or, perhaps, both these together). The height of this union is 68 millimetres, or about two inches English, and its thickness from before backwards is 38, or 1½. The circumference of the two bellies thus united is 47 centimetres, or about 14 inches.

The children, who are of the female

sex, are well developed, nevertheless their bodies are rather small in size; the four arms and legs are equally developed respectively. There is no concord of the functions; each has a separate life; so that often the one sleeps while the other is crying and weeping, or the one eats and takes the breast while the other continues sleeping.

So also the act of defecation does not occur simultaneously in both. Syrup of violets given to the one provokes evacuations of a deep green colour; while the stools of the other are devoid of this coloration, and *vice versa*,—a fact which sufficiently demonstrates that each of them has a distinct digestive apparatus.

The parents are of good constitution, and belong to the class of day labourers. The father's age is 44 years, the mother's 38; they have previously had three children, whereof one is still living. The mother states herself to have experienced nothing at all remarkable during pregnancy.

The labour lasted a long time, and the expulsive pains were very severe. The child on the right was the first to be expelled, the head presenting: the other followed five minutes after; but, according to the midwife's statement, its feet came first. There was but one navel string and after-birth.

These truly curious beings, whom we propose to designate "*The Flemish Twins*," have received names, the eldest that of Marie, the youngest Sophia. They continue to enjoy good health, and everything promises that they will continue to live.

The question has been proposed to me as to whether it would be possible to separate them by an operation; but the results furnished by palpation and percussion of the seat of junction, give a strong presumption of a communication between the two abdominal cavities, and have thus dictated to me an answer in the negative. —*Med. Times*, 4th July 1849.

247.—*On Neuralgia of the Cervix Uteri.* By M. MALGAIGNE.—M. Malgaigne believes this to be by no means the rare disease it is generally thought to be. There are, indeed, two forms of neuralgia of the female genital organs—neuralgia of the cervix, and neuralgia of the appendices. Neuralgia of the cervix is often combined with leucorrhœa, or with an engorged state of the neck or body of the uterus. Its essential characteristic is the presence of a painful point, generally a solitary one, and almost always seated anteriorly, and towards the left. It is very rare for this tender spot to exist without being accompanied by neuralgic pains in the abdomen, loins, epigastrium, &c. These painful irradiations vary, both as regards their seat and extent, and are very likely to be mistaken for other affections. In several cases mere repose gives great relief; but in obstinate cases the greatest variety of means are sometimes unavailingly tried. M. Malgaigne, calling to mind, that in other neuralgiæ, the causes of which he could not discover, he had by their obstinacy been driven in despair to divide the affected nerve, resolved to proceed in an analogous manner in this case, and the incision of the painful point of the cervix was attended with great success. He has now performed the operation several times, and in but two instances has hemorrhage occurred, in both of which the curved scissors had made the incision horizontally. The vertical section has been attended with the loss of only a few drops of blood.—*Rev. Méd.-Chir.*, iv. 333-40, and *Med.-Chir. Rev.*, July 1849.

248.—*Intra-vaginal Respiration recommended in some cases of Parturition where the Child's Life is in Danger from Pressure on the Cord.* By M. M'CULLOCH, M.D. —The writer desires to make known a new mode of practice, by which he thinks that the amount of infant mortality will be lessened in many cases in which death, from pressure on the cord, is otherwise inevitable. "If we take the average of French, German, and British practice, we find by the most authentic statistics that danger to the life of the child from this cause occurs in breech presentations once in 53 labours; in presentations of the superior extremities, after turning, once in 261; and where the cord presents, once in 245 cases. Thus we have in 649 labours 12 presentations of the breech, 7 of the inferior extremities, 2½ of the superior extremities, and 2½ of the cord, occasioning a loss of life at birth of about two per cent. of all children born. This great mortality I think I have succeeded in diminishing in my own practice in three footling cases within the last eight months, by enabling the child to breathe while the head was still within the cavity of the pelvis, after the pulsation in the cord had been several minutes extinct. And this novel state of existence was maintained by keeping the child's mouth open with my finger, and the perineum expanded to allow air to have free access into the vagina. In future, I shall endeavour to accomplish this object with greater certainty by introducing into the mouth the end of the largest-sized gum-elastic male catheter,

with several perforations in it, and continue as before to allow as much air as possible to approach the face and nostrils. In all cases of malposition in which the practice I have suggested becomes desirable, the chance of respiration being established will be greater, if the means are used before the circulation becomes feeble in the umbilical vessels; and if the child is born alive in the absence of pulsation in them, it may fairly be conceded that we have been successful in our efforts to preserve life. Some cases may occur where a small-sized male catheter, with a suitable curve, might be used with advantage as a tracheal pipe. I need scarcely add that the infant's body should be kept warm, gentle traction employed, and all the other ordinary means of exciting contraction of the uterus used until the delivery is completed.

"If the practice I have here recommended is found to answer in other hands as it has in my own, something will have been achieved in obstetric science, in circumstances where the most skilful have hitherto frequently had to lament their inability to save the child's life."—*British American Journal*, May 1849, and *Med. Chir. Rev.*, July 1849.

VI.—MATERIA MEDICA AND THERAPEUTICS.

249.—*Lemon Juice in Rheumatic Diseases.* By Dr G. O. Rees.—Dr Rees directed attention, some time ago, to the beneficial effects of lemon juice in acute rheumatism, and he has more recently put forth, in the form of a pamphlet, the details of eight cases of this disease, successfully submitted to the new treatment. He considers the lemon juice superior to colchicum in its power of affording early relief to pain, subduing fever, and shortening the duration of the disease, and the cases recorded, so far as they go, undoubtedly warrant this statement. But, with a disease so capricious in its nature as acute rheumatism, a very extended experience is necessary to arrive at a correct estimate of the value of any new method of treatment. It so often happens that a number of severe cases, occurring consecutively, get well with unusual rapidity under all kinds of treatment, that we are led to attribute the recoveries to some accidental peculiarity in the nature of the disease itself, and not to the treatment employed.

The form of rheumatic disease in which the greatest benefit would appear to have been derived from the use of lemon juice, is acute rheumatism; and that form of rheumatic affection involving the smaller as well as the larger joints in acute inflammation, known as rheumatic gout.

In cases of pure gout, in which the inflammation is high, it is said that great advantage has been obtained, while in sub-acute and more chronic forms of the disease, the same marked benefit has not been experienced. Nor is it found in acute rheumatism that benefit accrues from continuing the remedy when the inflammatory symptoms have been checked, and debility remains.

In doses of half an ounce to an ounce thrice daily, the lemon juice appears to exert a marked sedative effect on the circulation; in one case, the pulse, which was 120, and full, was after one day's treatment reduced to 75, and rendered at the same time smaller; in another case, the pulse, which was 110 when the lemon juice was first given, was in two days reduced to 100, and in four days to 74. If we can rely on results obtained in one experiment, this action is manifested also in the healthy body. A clinical clerk took one ounce of the juice three times a day for three days, and carefully noted his pulse, which was naturally full, and 75 in the minute. After five doses the pulse became much weaker and more compressible, and numbered 70 in the minute; conditions accompanied by a feeling of general depression. On the third day the pulse became as low as 66, and was very small and compressible. The urine was always acid, and also natural in quantity till the third day, when it increased somewhat; the specific gravity was then 1·017, and there was a deficiency of lithic acid.

In the cases of rheumatism related by Dr Rees, the urine was never rendered alkaline by the use of the lemon juice, and in one case, in which the urine was alkaline before treatment, it became acid after the juice had been employed. We think it premature to speculate on the *modus operandi* of the drug, until its utility shall have been confirmed by more extended experience, and before we are in possession of more accurate knowledge as to its physiological action, more especially in reference to its effects on the urine, and the quantity of solids contained in that secretion.—*The Treatment of Rheumatic Diseases by Lemon Juice, with Cases.* By G. O. Rees, M.D., F.R.S. London, 1849.

250.—*On Glycerine and its Therapeutic Uses.*—The employment of glycerine as a local application in the treatment of deafness, and also for other purposes as a medicinal agent, has induced us to offer a few remarks on the preparation and properties of this hitherto neglected body.

To obtain glycerine, any fatty matter is saponified by a caustic alkali. The solution being decomposed by tartaric acid, which precipitates the fatty acid, is to be evaporated, and the glycerine dissolved out by strong alcohol. For medicinal use, it is best obtained by evaporating the water used in making *emplastrum plumbi.* Any lead which it may contain is removed by a stream of sulphuretted hydrogen passed through it when in a diluted state. If necessary, it may be boiled with animal charcoal, filtered, and evaporated.

It is a colourless syrup, sp. gr. = 1·26; it dissolves in water and alcohol, but is insoluble in ether (Kane's Chemistry, 1849, p. 872). Glycerine undergoes no change by keeping, but it is decomposed by heat; and when mixed with yeast, and kept in a warm place, is gradually decomposed, and converted into *metacetonic acid.* Its formula is $C_6 H_7 O_5 + Aq$.

Glycerine has a strong attraction for moisture, and being of a bland innocuous nature, it is obviously well adapted to afford a permanent moist covering to any part of the body to which it may be applied. It was first employed by Mr Yearsley in cases of deafness, arising from partial destruction of the membrane of the tympanum, and Mr J. Wakley and others have extended its employment to all cases of deafness accompanied by dryness of the external meatus, and it is probable that in some cases of this kind it may be more serviceable than the almond oil commonly employed to remedy a deficiency of cerumen. Dr Paterson of Edinburgh has obtained some improvement in one of three cases in which he applied it. A small piece of cotton wool is moistened with the glycerine, and introduced into the ear. When there is loss or partial destruction of the tympanum, we are directed to use a very small quantity of wool, and to moisten it well with the glycerine. This is passed to the site of the membrane, and when there, "the spot must be found which it is indispensable the wool should occupy and cover; for then only, and not till then, will success attend the application, and the patient regain the hearing."

Glycerine has been employed also as a local application in psoriasis by Mr Startin, and, it is said, with advantage.—*Pharm. Journ., Med. Times,* and *Lancet.*

251.—*On the Purgative Properties of the Oil of Anda.* By Mr Ure.—The plant which yields this oil is the *Anda Gomesii,* a member of the natural order of *Euphorbiaceæ.* In the *American Cyclopædia of Practical Medicine and Surgery* (vol. i., Philadelphia, 1834), we learn that "the part used in medicine is the fruit, which is about the size of an apple, and of an ash colour. On removing the external husk, a nut is presented to view, which is about two inches in diameter. It has a hard shell, which on being broken exhibits two cells, each containing one seed about the size of a chestnut. * * * By expression these seeds furnish a clear, pale, yellowish oil, which is destitute of taste and almost of smell; at common temperatures as fluid as olive oil." From experiments made in the Pennsylvania Hospital by Dr Norris, it appears that in doses of fifty drops it generally induced one evacuation, and in larger quantities operated copiously.

Mr Ure has found twenty drops a sufficient dose. He administered it on sugar. It offered nothing unpleasant to the taste, produced none of that heat in the throat which croton oil creates, and seldom occasioned nausea or griping; it rarely operated within a period of two hours, although in one or two instances he had known it act within half-an-hour after its ingestion.—*Pharmaceutical Journal,* July 1849.

252.—*Collodion as a Coating for Pills.* By Mr Durden.—For this purpose the pills may be placed on the point of a fine pin or needle, and dipped into the solution of gun cotton. The solution Mr Durden used had a sp. gr. of 0·810, and he found that two dippings gave a perfect coating. An aloetic or colocynth pill thus covered may be placed on the tongue, and no taste experienced of its bitter ingredients. Solution of gutta percha in chloroform, and bisulphuret of carbon, effect the same purpose, but the collodion is preferable.—*Phar. Journal,* March 1849.

LONDON: JOHN CHURCHILL, PRINCES STREET, SOHO.
EDINBURGH: SUTHERLAND AND KNOX, 23, GEORGE STREET.
FANNIN AND CO., DUBLIN; J. B. BAILLIERE, PARIS;
AND ALL BOOKSELLERS.

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

SEPTEMBER, 1849.

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I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

253.—*On the Physiological Anatomy of the Spleen.*—By W. R. SANDERS, Esq., M.D.—Dr Sanders arrives at the following conclusions, which he gives at present without any details:—

I. The malpighian glandulæ or sacculi, and the pulp of the spleen, constitute a true secreting apparatus.

A. The malpighian sacculi are hollow spherical membranous bags, completely closed, and filled with organised contents; they are attached to the trabeculæ by an arterial pedicle, and are imbedded in the pulp.

Saccular Membranes.—The outer membrane of the sacculi is fibrous, and contains *arterial* ramifications and numerous capillaries; their inner membrane is granular.

Saccular Contents.—On the inner surface of the membrane is applied a complete layer of nucleated cells; which are clear (not granular), of about 1-1200th inch diameter, and of a light yellowish colour, when not altered by the action of water. The rest of the interior of the sacculus is filled up by free corpuscles (containing nucleoli) of a light greyish colour, and of

about 1-4000th inch diameter, corresponding precisely with the nuclei of the cells, and by a homogeneous or slightly granular plasma.

The perfection of the forms, the constancy and uniformity of appearance of these corpuscular elements, together with their re-actions under water, acetic acid, &c., are extremely characteristic, so that they are easily and distinctly recognised. There is also evidence of the growth and maturation of the sacculi. This part, therefore, of the glandular anatomy of the spleen exhibits characters as perfect and as truly distinctive as the glandular elements of the liver, kidneys, salivary glands, &c.

The sacculus is the formative secreting organ, analogous to the acini of known secreting glands.

B. The splenic pulp consists, like the contents of the sacculi, of plasma and corpuscles; but the nucleated cells are extremely few, and mostly granular—hence the reason why they were not detected by observers who did not examine the sacculi apart from the pulp with sufficient care; the plasma is full of granules, which are distinct, and infinitely more abundant, than within the sacculi; and the corpuscles, instead of a regular uniform shape, are mostly angular, deformed, with great variety of shape and appearance, and *breaking up into granules*. These corpuscles are often, also, of a reddish colour; and, besides them, coloured semi-crystalline particles, of a deep red or yellow hue, and whose true relation is not yet perfectly made out, are found in the pulp.

The pulp is, therefore, that part of the glandular apparatus where the corpuscles of the spleen become disintegrated and dissolved into granules and plasma; and, if the sacculi are analogous to acini, it is probable that they burst and effuse their contents into the pulp, where they undergo degenerating changes, becoming thus fit for absorption: the pulp being a reservoir or *duct*, in which the secreted product is lodged for a time, and undergoes the ulterior changes of maturation and solution.

II. The veins are the absorbent elements of the spleen, and carry away its secretion.

This is rendered probable by their extraordinary number and size; by their abundant ramifications in the *pulp* (while the *arteries* are spread over the secreting *sacculi*); by evidence derived from the composition of the splenic venous blood, as shown in Béclard's recent comparative analysis of splenic and other venous blood (Archives Générales de Médicine, Oct., Nov., Dec., 1848); and by general analogy in the nature, functions, and relations of the portal circulation in the adult and in the fœtus.

III. The blood circulation within the spleen is peculiar, but the peculiarities are not confined to the venous circulation, as has been generally supposed, but are common to it with the arterial. Its general principle is, "the sudden and immediate transition from very large to very small vessels," which renders the circuit of the blood-current extremely short. This general rule does away with all the minor differences of vascular distribution found in the spleens of man, the horse, and dog, &c., compared with those of the sheep, bullock, &c.

The venous cells of the spleen, though, under certain circumstances, an undoubted appearance, are entirely artificial, and always produced by methods of preparation, on which no reliance should be placed.

There is no satisfactory evidence that the lymphatics are the excretory ducts or the spleen; nor that its fibrous tunic of trabeculæ are muscular, or anything more than very elastic.

Conclusion.—The spleen is a true secreting gland; and its product, which is some organised or organisable albuminous compound, is absorbed into the venous blood of the portal system, and *contributes*, but is not essential to, nutrition.

The elements here mentioned are constant; they are easily made out in the spleens of the bullock, sheep, &c., *when quite fresh*. In the human spleen, they are in general less easily analysed; but the microscope shows them to be identical, and, further, thus affords the means of recognising and establishing the existence of the malpighian sacculi, when (as not unfrequently happens in the human spleen) they are not visible to the naked eye, or, at least, not distinguishable from the pulp. —*Med. Times*, April 21, 1849.

[The lately published researches of Kölliker and Gerlach on this subject, are confirmatory, in some points, of Dr Sanders' observations. We shall lay them before our readers as soon as the paper of the former in the "Cyclopædia of Anatomy and Physiology" is completed.]

254.—*On the Ganglia and Nerves of the Heart.* By ROBERT LEE, M.D., F.R.S.—In the number of our RETROSPECT for August 1848, we gave an account of the investing fibrous membrane or fascia, which Dr Lee has found to exist between the serous pericardium and the muscular sub-

stance of the heart. It is in this fibrous membrane that Dr Lee finds the numerous branches of nerves, which he describes as being distributed to the muscular fibre of the heart, independently of those which had been described by Scarpa and others, as passing, along with the urinary arteries, into its substance. The nervous branches described and figured in Dr Lee's paper, in the Royal Society's Transactions, take a course, in many instances, across the arterial branches, and are enlarged into ganglia at the points of contact with the nerves accompanying these (see especially plate 3 of the paper alluded to).

"From the examination," says Dr Lee, "which I have made of the nerves of the healthy and malformed fœtal heart; of the hearts of birds; of the heart of the child at the ages of six and nine years; of the heart of the adult in the sound state; of the human heart slightly and greatly hypertrophied; and of the heart of the young and adult ox, the following conclusions may be deduced:—1st, That the blood-vessels and the muscular structure of the auricles and ventricles of the heart are endowed with numerous ganglia and plexuses of nerves, which have not hitherto been described or represented in the works of anatomists. 2dly, That the nervous structures of the heart, which are distributed over its surface to the apex, and throughout its walls to the lining membrane and columnæ carneæ, enlarge with the natural growth of the heart before birth, during childhood and youth, until the heart has attained its full size in the adult. 3dly, That the ganglia and nerves of the heart enlarge like those of the gravid uterus when the walls of the ventricles are affected with hypertrophy. 4thly, That the ganglia and nerves which supply the left auricle and ventricle in the natural state, are more than double the size of the ganglia and nerves distributed to the right side of the heart."—*Phil. Trans.*, Part I. for 1849; *Med. Times*, August 11, 1849.

255.—*On the Effects of highly-condensed Air on the Organ of Hearing.* By Dr Detmold. — The first phenomenon which was observed when the men entered into the condensed air was a more or less severe pain in the ears. This pain commences immediately on entering into the compressed atmosphere, and ceases as soon as an equilibrium is established between the condensed air and the air which is contained in the interior of the ear. This explanation appears the more probable, as the pain was easily removed by the act of deglutition. In some of the workmen this pain in the ears was so slight as to be hardly perceptible, while in others it was very intense. With others, again, it did not exist at all in entering into the condensed air, while it became very severe on leaving it, and getting out into the open atmosphere; the latter case was, however, of rare occurrence. A certain bodily disposition seemed to exert some influence upon the degree of pain which the men experienced, as the same person would one day feel it only very slightly, while at other times, apparently under the same circumstances, the same person would suffer intensely. Besides, the fact was established, that the pain would be lessened in proportion as the transition from the open air into the condensed, and from the condensed into the open air, was slower and more gradual.

One of the miners, a man by the name of Floc, who had been deaf since the siege of Antwerp, always heard better in the condensed air than any of the other miners who were not deaf. We regret that we only find this brief statement of the bare fact, without mentioning anything of the nature or cause of the man's deafness, precluding thus any conclusions at which we or our readers might have arrived. It might be that the cause of the deafness was an obstruction of the Eustachian tubes, from thickening of the lining membrane, which was temporarily removed by the pressure of the condensed air. But why, then, should he hear better than any of his companions who were not deaf?—for the comparison which is made seems to imply, that the hearing of those who were not deaf became imperfect in condensed air. It must, therefore, have been a cause which, while it affected a sound ear, temporarily restored a diseased organ. May not condensed air act as a stimulus upon the organ of the ear, which, while it is too powerful for a sound ear, excites to action an organ perhaps partially paralysed, which requires an artificial stimulus—a result analogous to the fact, that a person suffering from nervous deafness hears better in a noisy place; as, for instance, when riding in a carriage? Or does condensation alter the sound-conducting property of the air? Are the vibrations of condensed air more intense, or less so, than those of the air when under no pressure?—*New York Jour. of Med.*, Sept. 1843.

256.—*New Injection.* By Mr Goadby. —Mr Goadby has succeeded in obtaining complete injection of the finest capillaries, by employing the acetate of lead and bichromate of potass, dissolved in separate

portions of water, thickened by the addition of gelatine. This is an improvement on Gruby's injection, which consists of the acetate of lead and chromate of potass, in separate portions of pure water. Like others, Mr Goadby has found Gruby's method very unsatisfactory; the vessels being flat, and a well-injected piece of tissue being so rare, that, in the words of Mr Bowman, the operator must consider himself well rewarded for two or three days' work if he succeed in finding a microscopic piece finely injected.

With the ordinary vermillion and size injection, satisfactory results are seldom obtained. The chromate of lead, used like vermillion in the ordinary way, does not prove superior to the latter, but succeeds better than when a salt of lead and the chromate of potass are used separately and dissolved in water, as in Gruby's injection; in the latter case the solution of the chromate was found to pass out through the coats of the vessels as rapidly almost as it was injected.

By giving some consistence to the fluids injected, this rapid transudation is prevented; the capillaries are freely distended, and are kept permanently so by the insoluble bi-chromate of lead which is formed when the two fluids meet.

Mr Goadby's injection is compounded as follows:—

Take of a saturated solution of acetate of lead ℥viii.; and of a saturated solution of the bichromate of potass ℥viii.; put them in separate vessels, and to each of them add a solution of gelatine, consisting of water ℥viii., and gelatine ℥ii. (the gelatine having been previously slowly dissolved in the water by the aid of heat); mix well by stirring with a glass rod, strain through fine flannel (a separate piece for each fluid), and raise to a temperature of 90° in a water bath. The fluids are now ready for use. Inject the potass first, then the acetate of lead. The part to be injected must be thoroughly warmed by being immersed for an hour or two in water at 90°.

The following is Mr Goadby's plan of procedure when operating on a fœtus, which, from there being no cut vessels, is best adapted for general purposes. A pipe is to be put into the umbilical vein, and the arteries are to be left open until the yellow fluid begins to flow from them, when they are to be tied. The whole 16 oz. of the prepared potass solution is now to be injected; and the piston should be made to descend so slowly as scarcely to be seen moving. The other solution is now to be thrown in in the same manner, when the yellow colour will instantly appear. In about half-an-hour 8 oz. of each fluid are to be again injected in the same order as before; and this is to be repeated in another half-hour; and after this the subject will require another batch still. Towards the conclusion the fluids should be thrown in alternately; and the process should be continued so long as the injection is felt to flow in vessels. The distension of the body is very great; and the piston may be pushed home and rise again several times, without causing any extravasation. To inject a fœtus on this plan will occupy four to five hours; the temperature of the body must be kept at about 90° during the whole process, and when this is finished the body must be put into cold water; next day it is ready for dissection.—The dissection is a disagreeable and difficult task. Nearly all the gelatine and acetate of potass is found to have passed out of the vessels, and to have separated the tissues widely from each other; the colouring matter of the blood has passed out in the same manner and stains the gelatine. The gelatine, says Mr G., separates and defines the different layers of vessels; the arteries are distinguished by the purity and richness of the colour, while the veins are detected by the altered colour imparted by the blood.

So universally does this injection permeate, that Mr G. was occupied in dissecting the various parts of a fœtus ten hours a-day for two months, and even then the subject was scarcely half exhausted. This contrasts strongly with the statement of Mr Bowman quoted above.

This injection is not fitted for the pathologist, as, according to Mr G., the infiltration of the gelatine produces new and puzzling appearances.

If the specimens are to be preserved wet, Mr G. recommends them to be kept in his B. fluid; if dry, it is sufficient to wet them with oil of turpentine, and they may then be put up in Canada balsam. In examining dense tissues, such as the skin, dilute nitric acid may be used as a corroder; liquor potassæ may answer better. Mr Goadby has found that in specimens several years old the capillaries are destroyed by the acetate of potass; he would therefore recommend the use of the *nitrate* instead of the acetate of lead, the nitrate of potass, which is formed during the process, acting as a preservative of the tissues. The gelatine employed by Mr G. was that sold by pastry cooks at 3d. per ounce; common size is too coarse; isinglass is expensive; the French and Russian glues to be had at the same places are well fitted for the purpose.—*Lancet*, March 17, and May 12, 1849.

II.—PRACTICE OF MEDICINE.

257.—*On the Treatment of Chorea.* By M. A. Trousseau and Ch. Lasègue.—In the last Number of the Retrospect we gave Dr Todd's account of chorea, and his observations on the interesting relation which subsists between that disease and affections of the heart. That connection Dr Todd accounted for by assuming the dependence of the two diseases on the same morbid diathesis—the rheumatic; the unhealthy condition of the blood being the exciting cause of an insidious endocarditis in those labouring under chorea. Our readers will recollect that similar views of the connection between chorea and rheumatism were brought before them, upwards of two years ago, by Dr Begbie (Monthly Journal, April 1847), who adduced some striking facts to prove that many of the sufferers from chorea inherit the rheumatic diathesis, or have themselves suffered from rheumatism, either in an acute or chronic form, and that in both of these classes the affections of the heart had been manifested.

The paper of MM. Trousseau and Lasègue—now before us—affords new proofs of the correctness of Dr Begbie's theory. These authors have had numerous opportunities of observing affections of the heart occurring in chorea, which they allege to be similar to those which supervene on acute rheumatism. Their more immediate object, however, is to direct attention to the employment of nux vomica as a remedy in the treatment of chorea. The preparation they have used is the sulphate of strychnine—a preparation of the alkaloid, very soluble, and consequently easy of administration. Of the sulphate they directed a syrup to be prepared, in the proportion of 5 centigrammes (⅓ths of a grain) of the sulphate of strychnine to 100 grammes (3 oz. 2 drs.) of simple syrup; and this is the exact form they have employed, augmenting or diminishing the amount of the sulphate, according to the effects produced by its administration. Being a powerful remedy, and one whose immediate effects on particular constitutions will vary, its first doses should be small, and carefully regulated. In children of from six to twelve years of age the authors have commenced with six teaspoonfuls during the day; in adolescents, six dessert spoonfuls; in adults, three large spoonfuls. The doses are equivalent in the first case to thirty, in the second to fifty, and in the third to sixty, grammes of the syrup—twenty grammes of which contain about one centigramme (⅓th of a grain) of the salt of strychnine. These doses were increased or diminished, according to the effects produced; sometimes the same dose was continued for a few days. Under the influence of the remedy, there is produced a perceptible rigidity of the jaws, the neck, back, and limbs. This state does not continue long; there exist along with it a tendency to sleep, and a slight degree of fever. It is on the occurrence of these physiological effects that the authors have found the disease to yield and decline; and they have, therefore, recommended the persistent use of the strychnine until they are induced. Several interesting cases are related in confirmation of this point. The employment of the ordinary constitutional means is insisted on during the treatment of chorea by strychnine. In cases of chorea, where a state of partial paralysis had supervened, the authors have employed this remedy, and tested its efficacy.—*L'Union Médicale*, June 1849.

258.—*Puerperal Convulsions; their dependence on Toxæmia; explanation of their more common occurrence in Primiparæ.* By Dr Cormack.—Dr Cormack details the history of three cases of puerperal convulsions, which had occurred in his practice. The main object of his paper is to point out the connection between renal congestion and puerperal convulsions, which exists in a very great proportion of cases. He considers puerperal convulsions to be —though not always, yet generally—the toxicological results of non-elimination of the excretions of the blood; and that, in by far the greater number of cases, this non-elimination depends on renal congestion, caused by the pressure of the gravid uterus. Œdema and albuminuria are frequent concomitants or precursors of convulsions, as shown by Dr Lever and by MM. Devilliers and Regnault. The gravid uterus, or any tumour pressing on the renal veins, must cause congestion of the kidneys and consequent toxæmia; and this is the more injurious to the pregnant woman, as her blood requires an extra degree of depuration both from excrementitious matter from the fœtus, and also from the elements of milk. Retention of these should, Dr Cormack thinks, be considered as the cause, not only of convulsions, but also of various other distressing symptoms occurring in pregnancy. Uterine epilepsy probably often arises from toxæmia; and the suppression of the lochia may induce post-partum puer-

peral convulsions. When convulsions recur after delivery, we must suspect structural renal disease. The explanation of delivery generally arresting convulsions is not so much that uterine irritation is lessened, as that the hyperæmic state of the kidneys is relieved. The most common subjects of puerperal convulsions are strong healthy young women, pregnant for the first time; and an examination of the cases recorded by authors proves this fact. In them the abdominal walls are most unyielding, and unable to relax under the pressure of the gravid womb. Cases of puerperal convulsions in subsequent pregnancies might be either toxemic or non-toxemic. The toxemic cases may be classed under the following heads:—1. Persons who have never gone to the full time; 2. Persons of extreme muscular development; 3. Persons suffering from structural disease or obstruction of the kidney; 4. Excessive volume of uterine contents, including twin cases, &c. Dr Cormack is desirous of drawing attention to toxæmia as a cause of puerperal convulsions, and also of recognising non-toxemic convulsions. He thinks that Dr Tyler Smith, who has treated this subject more philosophically than any preceding writer, has, while recognising toxæmia, attached too little importance to it. —*Proceedings of Westminster Medical Society, in Med. Gazette*, June 15, 1849.

259.—*Notes from the Clinical Lectures of M. Bouillaud.* By M. LEFEVRE.—*Pneumonia.*—In ten cases of this disease, four were double, two occupied the whole extent of the right lung, three the base, and two the summit. In all it was clearly marked, in eight being in the second stage, in one in the third, and in one in the first stage. A table is given in which are the names of the patients, the stage of the disease on admission, the number and extent of the bleedings and cuppings, the number of blisters, the seat of the disease, the complications, and the date of recovery, with the view of showing that M. Bouillard's method of *jugulating* pneumonia, although unique, is not uniform, and that the quantity of blood he takes in a given time is determined by the severity of the inflammation, and by the age, constitution, and temperament of the patient. The conditions of the disease and of the patient being given, we may, however, determine approximately, according to his views, the amount of blood to be abstracted.

It has been often stated that M. Bouillaud's success depended on the fact of his patients being adults, and on the mildness of the majority of his cases; but in the table to which we have referred, one of the patients was seventy-three years of age; and, although the inflammation was very intense, and occupied the summit of the lung, it lasted only four days; and further, we have already shown that in many of these cases the disease was far from mild. The success of his treatment seems illustrated by the fact, that the duration of the disease in eight of these cases treated by his method, was, on an average, only six-and-a-half days, the period of treatment being less than four days, while in the two others it was six and twelve weeks. We need hardly remind our readers that the peculiarity of Bouillaud's treatment consists in the repetition of blood-lettings. In one of the cases recorded in the table to which we have referred, and in which the patient entered the hospital on the third day of the disease, the pneumonia being double, four venesections to the extent of eighty ounces were practised, there was a cupping to sixteen ounces, and two blisters were employed.

Pleuritis.—During the same period six cases of inflammation of the pleura were admitted; and in this affection, according to Bouillaud, his system of blood-letting is equally valuable. Certain complications may, however, render it necessary to modify the treatment.

Bronchitis is one of the most common complications of pleurisies and pneumonias, and as it adds in some degree to their severity, it becomes a question, how far the ordinary treatment of those diseases requires any modification. Bouillaud takes some unnecessary trouble to show that there is nothing *specific* in affections of the mucous membranes, and that bronchitis, being an inflammation arising from cold, like pneumonia and pleurisy, must be combated in a like manner.

Bilious pneumonia and pleurisy are common, but the green expectoration, regarded by some authors as characteristic of these affections, is often absent.

These bilious pneumonias and pleurisies are due to the extension of the inflammation to the peritoneal investment of the sub-umbilical region, and not, as Stoll and others have maintained, to any peculiar state of the *primæ viæ*, and their contents.

In all the patients thus affected (being four in number) the following symptoms were more or less prominent; a bitter taste in the mouth, the tongue covered with a whitish-yellow fur, hiccup, singultus, bilious or mucous vomitings, a more

or less jaundiced appearance of the skin and conjunctivæ, greenish urine, gelatiniform expectoration: the blood-clot of a yellowish-green tint, especially in its upper layer, and perhaps the character of inflammatory blood while the serosity communicated a yellow tint to linen immersed in it.

[The reporter gives a case of bilious pleuro-pneumonia in the second stage, occurring in a man, aged 20 years, who was admitted on the 6th of May. We shall give the amount of blood extracted; the remaining treatment being very secondary. We may observe that on the day of his admission and the previous morning, there was considerable epistaxis.

May 6th.—Bled to 16 ozs. in the morning, and 12 oz. in the evening.

May 7th.—Bled to 12 oz. in the morning, cupped to 12 oz. in the afternoon, and again bled to 12 oz. in the evening.

May 8th.—Ordered to be bled to 12 oz., but only half that quantity was taken.

May 9th.—No venesection performed, and as we find that, on the 10th, "Il se trouve très bien" we may conclude that he suffered no material injury from having accidentally preserved six ounces of blood on the 8th. As we read that the convalescence was prompt, and that he had no relapse, we have no right to deny "that this case shows the efficacy of properly arranged (*convenablement formulées*) venesection in bilious pneumonias and pleurisies." Still, we cannot help expressing our conviction that a less heroic treatment might have been followed with at least equally good results.]

Amongst other complications, we may mention the frequent coincidence of pleuro-pericarditis with pneumonia and pleurisy of the left side. In these cases the sounds of the heart should be daily attended to. The treatment is the same as in the preceding complication.

The reporter lays great stress on the cures of pleurisy being more rapid and complete when treated according to M. Bouillaud's method, than when milder means are adopted.

Another complication of pneumonias and pleurisies, depending on their position, is delirium. This delirium occurs in the ataxic variety, and is observed to correspond with inflammation of the summit of the lung. And here M. Bouillaud is equally energetic regarding the superiority of the system of blood-letting over the ordinary administration of antispasmodics, &c.

There is a typhoid form of pneumonia in which we have two morbid processes going on simultaneously, namely, inflammation of the lungs, and entero-mesenteritis; and here, according to M. Bouillaud, his system of blood-letting is equally efficacious as in the preceding forms, provided the intestinal glands have not reached the stage of ulceration. "Here," says the reporter, "as in all the other cases this system presents a double advantage; dissipating the entero-mesenteritis as it dissipates the pneumonia and pleurisy, it does not require us to neglect one organopathic condition at the expense of another, and enables us to dispense with the employment of purgatives and entero-cathartics, which always give rise to a congestion of the portal system, and consequently increase mechanically the vital congestion of the intestinal follicles. Now, if experience has shown that, under the influence of purgatives and emetics, the affection termed typhoid fever, or entero-mesenteritis, is neither materially modified in its progress, nor abridged in its duration, and that it is impossible to give a certain prognosis; observation has also proved the very opposite in reference to the new system of blood-letting in well-marked cases of entero-mesenteritis during its first period."

Typhoid or true adynamic pneumonia, is most common in aged persons. The local phenomena of inflammation of the lungs and pleura are primary; the characters of the typhoid or adynamic state being generally secondary, and neither connected with inflammation of the intestinal follicles, nor with any of the other general or local conditions which give rise to that condition, excepting the alterations induced by the pneumonia or pleurisy.

In pneumonia of the third degree, the most prominent typhoid or adynamic symptoms are the expression of depression and stupor, prostration of muscular power, dryness of the lips, tongue, and teeth, which are covered with sordes, the dry and dusty condition of the nostrils, insensibility to the calls of nature, bed sores, &c.; indeed, these symptoms may be regarded as indicative that the suppurative stage of pneumonia has commenced. To take blood in this case, even M. Bouillaud grants, might prejudice the patient, and bring his favourite remedy into disrepute; he observes, however, that a blood-letting is sometimes necessary to fulfil certain general indications.

In ordinary cases of pneumonia in old people, Bouillaud applies his *new formula* just as in earlier life, the cases being excessively rare in which the organism is so deteriorated as to render it necessary to limit the number and amount of the venesections. In general, his system of blood-

letting is well borne by old people, and when carried to the extent demanded by the intensity of the disease, the inflammation is as amenable to treatment as in earlier life.—*L'Union Méd.*, 1848.

260.—*On the Diagnosis and Treatment of Calculus in the Kidney.*—M. RAYER, in a memoir on *Pyelitis Calculosa*, enters very fully into this subject. The following considerations may aid us in the diagnosis of this affection :—

1. Lumbar pain (one of the symptoms) occurs in various species of acute nephritis, in hydatids of the kidney, in nephritic colic, in retention of urine without inflammation, in lumbago, in certain diseases of the spine, in psoitis, in aneurism of the aorta, in pregnancy, in certain uterine affections, in certain cases of partial peritonitis, and in inflammation of the cellular tissue outside the peritoneum.

2. In nephritis the pain is often very similar, although usually less acute. We may be guided in our diagnosis by observing whether there is purulent matter in the urine, and whether there is any tumour in the lumbar region.

3. Calculus in the kidney is distinguished from nephritic colic by the fact, that in the first the pain is more acute and more intolerable, and that it ceases the moment the calculus has escaped from the ureter.

4. When there is retention of urine, either complete or incomplete, it is not uncommon to hear patients complain of pain in one or both lumbar regions, the pain being so severe as to induce the belief in the existence of pyelitis or calculus; and yet, after death, no appearance of inflammation will be seen, the kidneys in these cases being apparently healthy, with the exception of slight atrophy of the cones, and pale rather than red. In this case death occurs suddenly from cerebral disturbance.

5. In lumbago the pain commonly affects both sides at once, and generally with the same degree of severity, and is always increased by moving the body; there is generally no fever, and it is often preceded by other muscular pains; in the case of a calculus, is almost always on one side alone; and, although it is augmented by contraction of the lumbar muscles, the augmentation is not to be compared to that occurring on contracting the muscles in lumbago. There is seldom much difficulty in distinguishing between pain in the lumbar region and in the kidney.

6. In caries of the lumbar vertebræ the pain is dull and usually much less intense than in the case of a calculus in the kidney. The caries is also distinguished by the alteration in the form of the vertebral column, and often by abscess pointing towards the groin or the nates, and frequently by more or less paraplegia, either with or without muco-purulent matter in the urine. Paraplegia, again, often induces retention of urine, which produces chronic inflammation of the bladder, and sometimes of the ureters, and of the pelvis of the kidney.

7. In psoitis the patient feels a dull pain in the side affected; the parts become afterwards more acute, extending from the lumbar vertebræ to the pubis, and the body being bent forwards and towards the diseased side. The movements of the thigh are very painful, and it is almost impossible to straighten the back when the body is once bent. The inguinal glands then become enlarged, and a collection of pus is formed under the peritoneum and the body of the muscle, often causing swelling of the limb.

8. Aneurisms of the aorta occasionally produce lumbar pains similar to those in the kidneys.

9. Certain diseases of the ovaries and partial peritonitis of the lumbar region, may simulate renal disease, and especially the affection we are now considering, particularly if they co-exist with acute or chronic cystitis.

10. The same remark applies to inflammation of the extra-peritoneal cellular tissue in the vicinity of the kidney.

The mere presence of pus in the urine does not afford much aid in the diagnosis of this affection. The following points are, however, deserving of attention. When there is neither pain nor swelling in the region of the kidney, the examination of the urine will enable us to distinguish between pyelitis and cystitis; when there is inflammation of the pelvis and calyces, there is dysuria with a deposit of pus; when there is catarrh of the bladder, the urine is glairy and viscous. The glairy character of the urine may, however, occur in renal pus when alkaline urine is secreted; and, on the other hand, the pus in cystitis is not always glairy. We have no right to assume that pus comes from a kidney containing a calculus, unless pain has existed in the upper region of the kidney.

The distinctive characters of renal tumours are then noticed by our author. The tumours with which renal abscess may be confounded, are those from enlargement of the spleen, liver, or gall-bladder; those from cancer and other diseases of the kid-

neys, extra-renal abscess, abscess from caries of the vertebræ, fæcal abscess, &c. We cannot follow him in the diagnosis of these tumours, and proceed to notice the treatment of calculus in the kidney.

At the beginning of the attack, and in its first stage, the nephritic pains are relieved by warm baths and mucilaginous drinks, linseed tea, emulsions, small beer, and laudanum, &c.; by leeches, or, better, by cupping glasses applied to the painful part.

When the pain is very acute, and accompanied with suppression of urine, violent efforts at vomiting, and a tendency to syncope, relief is afforded by warm fomentation of assafœtida or henbane leaves; friction with the tinctures of opium and camphor, and the inhalation of ether, are serviceable. The expulsion of the calculus from the ureter is sometimes favoured by cold, the patient being stripped and his feet placed on the pavement. The expulsion is also favoured by the application of dry cups to the course of the ureter, or on the perineum.

When the primary symptoms have yielded, if the calculus be not expelled, and the urine is charged with mucus, we must explore the bladder, and if a small calculus be found, it must be extracted or broken, or its expulsion should be promoted by causing the patient to drink large quantities of spring or mineral water.

When gravel or calculi remain fixed in the calyces, &c., the inflammatory symptoms thus induced may be relieved by the warm bath, linseed tea, mineral water, or cupping.

Patients should abstain from sexual intercourse.

With the view of diminishing the mucopurulent secretion which occurs in these cases, oil of turpentine has been found useful. Rayer speaks favourably of cubebs, copaiva, purified turpentine, &c., in diminishing the secretion, and checking the frequent exacerbation of renal pain. Linseed tea and infusion of aniseed, constitute the best drinks.

Another indication is the physico-chemical treatment of granular calculi. Certain drinks, which may be taken in large quantity, such as spring water, act mechanically in washing the calculi, carrying the smaller gravel through the ureters, and facilitating their escape by increasing the amount of urine. The action of these drinks is confined to so narrow a space, that comparatively little can be expected from them. Neither can chemical action do much. Alkaline drinks are certainly favourable when these are uric acid calculi, and in pyelitis produced by concretions; but experience shows us that in gravel (a condition in which this form of calculus most commonly occurs) the uric acid deposit, although temporarily removed by this means, soon recurs.

When we obtain chemical indications that the granular calculi are composed externally of phosphates, we advise the use of carbonic acid drinks; but it is certain that these seldom render phosphatic urine clear and transparent. Alkaline turbid urine is almost always the result of chronic inflammation of the kidneys; and we cannot expect to modify it by either vegetable or mineral acids. The treatment recommended for chronic nephritis ought to be adopted.

When the calculus is so impacted as to give rise to an accumulation of urine and pus in the cavity of the kidney, Rayer advises that we should attempt to prevent the establishment of acute inflammation in the part, by rest, by the daily use of the bath, by leeches, by topical emollients, and by well-regulated diet, prescribing venesection when symptoms of inflammation show themselves.

If, however, the tumour is habitually painful, notwithstanding the above treatment, if there is continual or hectic fever, if there is diarrhœa, &c., and if none of the pus find its way down the ureter, the operation of nephrotomy, with all its dangers and difficulties, must be resorted to.

[Three modes of performing nephrotomy are described by Rayer, who concludes his memoir by the following warning.]

We must not attempt the operation—

1. When we are sure that both kidneys are affected, and probably contain calculi, provided there are no extra-renal abscesses, which should always be opened without delay.

2. When the pus passes freely into the bladder, when there is no renal tumour, nor immediate fear of renal fistula, and especially when a favourable condition of the system leads to the belief that the other kidney is acting with increased energy.

3. When there exist, at the same time, incurable lesions of the bladder, prostate, or intestines.—*Condensed from Dr Bryan's Translation in the Phil. Med. Examiner*, Oct. and Nov. 1848.

261.—*On Melæna in Children.* By M. Rilliet.—M. Rilliet, one of the authors of the classical work on the "Diseases of

Children," takes the occasion of two cases of intestinal hemorrhage in children which have come under his notice, to furnish a summary of what is known upon the subject. The cases he relates are unique, inasmuch as they are examples of this rare disease occurring in twins. The first child, though not large, was well formed, and had cried strongly after birth. The meconium had been discharged by castor oil; the child had sucked, and seemed in all respects doing well, when, several hours after birth, it passed two or three stools wholly composed of blood, and became deadly pale and cold, and was unable to swallow. It cried, but there was no vomiting or convulsion. Cold compresses were applied to the abdomen, the warmth of the extremities being maintained; rhatany was employed both in injections and external applications, but the former being always returned with blood, the latter were alone continued. The child gradually rallied after six bloody stools had been passed. While this child yet continued in an alarming state, the other twin was seized with vomiting and purging of blood, and decoction of rhatany was in the same way applied to its belly. It recovered, though the bleeding continued more obstinate. Both children remained well, though long continuing exceedingly pale.

Different authors have ascribed the affection to various causes, but an analysis of the published cases leads Dr Rilliet to doubt the efficacy of most of those assigned, *e. g.* the condition of the health of the parents, the nature of the labour, the too early division of the funis, the weakness or plethoric state of the child, the presence of irritating matters in the intestines, external violence, or the rupture of vessels; and although the affection usually occurs at from the first to the fourth day, it has been met with as late as the sixth, eleventh, or twentieth,—boys seeming more liable to it than girls. Dr Rahn-Escher, of Zurich, believes that much depends upon hereditary influence, a diseased state of the digestive organs being communicated from parent to child. This view would seem to be best supported in those cases where the parents also suffer from hemorrhages, or where several of their children do so simultaneously or successively. Billard states that the majority of fifteen children dying from it were remarkable for plethora, but the experience of others does not bear out this view. Numerous pathological observers agree in stating that there is no important vascular lesion, the mucous membrane being sometimes not more injected than natural; others have found the abdominal veins gorged with blood, and the mucous membrane softened and reddened. The naturally injected state of the intestinal tube in the child may act as a predisposing cause when there is atony of its vessels, or obstruction to the abdominal circulation. The difficulty with which respiration is established at birth, especially if the lung is incompletely dilated, may exert an influence.

The bleeding in most cases has followed the meconium, but unpreceded by any premonitory symptom. It is usually abundant and frequent, rich in colour, and either fluid, or in part coagulated. Hæmatemesis, though more rare, may yet be abundant; and Etlinger gives a case in which a pound of blood was discharged by vomiting and stool. Sometimes the hæmatemesis is more abundant than the intestinal hemorrhage, but it is always accompanied by the latter. The hemorrhage may attain its maximum in twenty-four hours; but it may be prolonged to the third or fifth day, and in very rare cases even to the tenth.

Of twenty-three cases in which the issues have been recorded, twelve recovered and eleven died. In nine of the twelve recovery seemed complete, but in three the constitution was deteriorated. In treating the disease, sometimes mere demulcents, at others astringents, the mineral acids and the internal use of cold, and in others applications to the belly and enemata, have been tried in different cases. M. Rilliet believes that the best treatment consists in the free exposure of the child to the air, the keeping its extremities warm at the same time, the application of astringents to the abdomen, and the careful administration of nourishment, or, if the child's condition requires it, of stimuli.—*Gazette Médicale*, 1848, No. 53. and *Med.-Chir. Rev.*, July 1849.

262.—*Swallowing an Iron Fork without Fatal Consequences.*—M. VELPEAU detailed to the Académie de Médecine, and authenticated the particulars, of an extraordinary case which occurred in the practice of M. Chemin. This surgeon was called, May 15, 1847, to a countryman, æt. 32, who, finding some difficulty in swallowing a bone, endeavoured to assist its passage by means of an iron fork, 10 inches in length by 1¼ in breadth; but this bringing on vomiting, he let go the fork, and it at once slipped into the stomach. At first he suffered little pain; but after a while this became intolerable, especially on taking a little food or drink; occasionally, too, he vomited abundance of watery fluid. The fork lay at first along the great

curvature of the stomach, with its prongs turned towards the left side, and after a fortnight approached the pylorus, where it remained nearly four months, during all which time vomiting of black matters occurred several times a day, the mouth being continually filled with a watery fluid. His suffering was intense; the pulse was normal, tongue moist, appetite gone, attempts at ingestion insupportable. At last the foreign body passed the pylorus, and in six weeks had traversed the small intestine, to become lodged for thirteen months in the right flank, opposite the ileo-cæcal valve. During the passage there was great occasional pain, especially on any movement, however slight. After remaining at the right iliac region for five months, the fork began to be dissolved. The patient now suffered from violent colic, constipation, distension of the belly, and difficulty in passing urine, black and brick-coloured matters being occasionally voided by stool. Next followed another eight months of alternating constipation and diarrhœa, some diminution of the pain, an enormous and incessant appetite being also observed; and gradually the patient resumed his laborious occupations. On the 10th December, 1848, the patient was seized with a most violent colic and constipation, both of which were at last relieved by repeated doses of castor-oil, a large quantity of fæces being passed; after which he felt quite well, and believed himself cured. However, on the 8th February, 1849 (twenty months after swallowing the fork), violent pain and expulsive efforts produced bloody stools, in the midst of which he found a considerable portion of the fork. Since then he has continued quite well.—*Gazette des Hôpitaux*, 1849, No. 66, and *Med.-Chir. Rev.*, July 1849.

[The solution of the fork might have been promoted by acid drinks.]

III.—PRACTICE OF SURGERY.

263.—*Femoral Aneurism—Rupture of the Sac—Death.*—An interesting case of femoral aneurism occurred in the Royal Military Hospital, Phœnix Park, Dublin. The patient, aged thirty-four, a sergeant, remarkable for his good conduct, of five feet ten inches in height, muscular and finely formed, was, to all appearance, in perfect health up to the month of March 1848, when one day, being engaged in the extension motions, he felt, at the instant of attempting to touch the ground without bending his knees, a sudden pain in the left groin, as if something had given way. In April he was sent to England on the recruiting service, and he commenced and continued to perform the arduous duties of that service till the latter end of November. While in England, however, he afterwards stated, the swollen condition of the left leg became persistent, and he discovered that he had a lump about the size of a hen's leg in the left groin. In November he asked permission to return to his regiment; and on the 22d of December, he sought, for the first time, medical advice. He was now examined by the surgeon of the regiment, who ascertained that the lump in the upper part of the thigh was an aneurism, forming a large, pale, flattish tumour. The patient was sent by easy stages to the Royal Military Hospital in the Phœnix Park, where he arrived on the 20th of January, and was placed under the care of Dr Fox, staff-surgeon.

When Dr Fox examined this soldier, who had been in active duty, and without complaint on his part of illness, up to the 22d of the preceding month, he saw the upper part of the thigh occupied by what seemed to be an enormous fungus hæmatodes, encroaching on the abdomen. The tumour was of a nearly conical form, the base being one foot eleven inches in circumference, and the elevation not less than five inches. It pulsated under the hand, and yielded to the ear a single bruit. The surface was abraded, ecchymosed, and discoloured. The thigh below the tumour was of enormous size; the leg œdematose. A consultation of some of the chief surgeons in Dublin was summoned; Sir Philip Crampton, Mr Cusack, and Mr Adams assisted Staff-Surgeons Fox and Barrett. Every possible mode of treatment was discussed; for it was pitiable to see a fine, intelligent young fellow, with courage to suffer and firmness to endure, and to be forced to leave him to his irremediable fate.

It was doubtful whether the external iliac could be reached, so much did the base of the tumour overlap the abdomen; but, admitting that a ligature could be passed round it, what good result could be hoped for? The œdema of the leg, as well as the size of the tumour, rendered it more than probable that the femoral or saphena veins, if not both, had become obliterated, and thus, if it should happen that the artery was sound, and that the patient es-

caped suppuration of the sac, still gangrene of the limb might be ultimately expected. It was found possible, in this case, to compress the aorta, and thus control the circulation in the extremities. Under such circumstances would it be warrantable to perform the old operation for aneurism—to open the sac, empty it of its contents, and pass ligatures round the artery immediately above and below it? This was certainly practicable; but it was more likely that the artery should be diseased in the immediate vicinity of the sac; and this operation would not preclude the ultimate supervention of gangrene. A third possible mode of proceeding was the combination of either of the former operations, with a subsequent amputation at the hip joint, which would obviate the occurrence of either gangrene of the limb, or suppuration of the aneurismal sac; but the statistics of this amputation are too unfavourable to encourage its being tried under such circumstances. Any of these operations might involve death *in isto opere*; and it was at length decided to let the disease proceed without surgical interference. Sir Philip Crampton had known two instances in which aneurisms of equal magnitude had undergone spontaneous cure; the pressure of the sac having caused inflammation and obliteration of the artery. Similar cases have been described by the older authors; and it was resolved, in the present instance, to watch the case closely, but to give to nature the chance of herself effecting a cure.

The aneurism rapidly enlarged during the few days succeeding; and on the 25th it ruptured, the blood spouting to a distance of at least three feet. Drs Fox and Barrett, who had been in constant and assiduous attendance, immediately rushed to the man's aid. The latter at once compressed the aorta in the abdomen, and arrested the hemorrhage; the former opened the sac, turned out the coagula, and tied the artery just above its entrance into it. It was found that this completely controlled the circulation. The other means proper for the occasion were had recourse to. Wine was abundantly given; but the shock was too severe; the man slept for about four hours, then awoke with a sensation of faintness, and gradually sank in six hours afterwards; he died on the morning of the 26th.

At the autopsy, the anticipated appearances were discovered. The arterial system was natural, except at the seat of the aneurism. The aneurism was found to be double, one sac occupying the large tumour which had burst, and communicating with another, which extended down the thigh under the fascia lata. The femoral vein was obliterated along a considerable part of its course. It was plain that surgery had no resources to meet a disease so complicated and appalling; but the case although terrible, is not the less instructive.—*Medical Times*, March 3, 1849.

[In the discussion which followed the communication, different opinions were expressed as to the mode of treatment which ought to be adopted in similar cases. Considering the facility with which in this case pressure upon the aorta was found to command the circulation, and the general healthy appearance of the patient, we think that there would have been a greater prospect of success had the operation of opening the sac and securing both ends of the vessel been performed without any delay, instead of waiting till it opened spontaneously. The hemorrhage, which seems to have been the immediate cause of death, would thus have been prevented.]

264.—*Retention of Urine from Stricture relieved by Puncture of the Bladder, and subsequent Incision through the Perinæum.* By Mr Benjamin Travers, jun.—Mr B. Travers related the case of a young man to whom he was summoned for the purpose of giving the bladder some immediate relief. No water had passed, otherwise than by drops, for some days, and the patient was sinking rapidly, from the local distress and bodily exhaustion so produced. The case occurred at St Thomas's Hospital, London, in the winter of 1843, Mr Travers being at that time resident assistant-surgeon. The author thus describes the operation which he performed on that occasion, and its immediate result:—"The patient having been drawn to the foot of his bed, and his chest raised with pillows, I incised the skin in the median line, immediately above the pubic symphysis. I then pushed a straight dropsy trochar and canula into and through the anterior wall of the bladder. On withdrawing the trochar, the first jet of urine went half across the ward floor. The relief was very decisive, but so sudden as nearly to induce fatal collapse." The patient was presently restored by a large dram of gin. At first, the canula was tied into the bladder by tapes, and stoppered. After some days, it was removed, as it no longer hindered the drainage of water by its sides, when the bladder filled. An elastic tube was next introduced, and other plans devised for controlling the constant leakage of the organ, without much success. In about a month, the wound had undergone

a contraction, and was fistulous, and as the progress of the case was slow and unsatisfactory, as regarded the stricture, Mr Green, one of the surgeons of the hospital, now cut down upon the diseased part in perinæo, and succeeded in pushing a catheter into the bladder. After this second operation, nothing of importance occurred to retard the recovery and final convalescence of the patient, who left the hospital, well, in the summer of the same year, 1843. His wounds all healed soundly, and there needed only the careful introduction of a metallic instrument at intervals, to avert the danger of relapse. The author was of opinion that the first operation rescued the patient from impending dissolution, he being at the time cold and insensible, with a thready, irregular pulse. Any proceeding followed by loss of blood must have proved instantaneously fatal, and a case was mentioned where the patient died under such circumstances, before the bladder could be relieved by incising the perinæum. Puncture of the bladder was advocated by Ponteau and Thirand, in 1760; and in later times by Hey, Home, and Abernethy, who all practised the operation with good success. There are many living practitioners who think well of it. The author quoted the evidence of Mr Cock, of Guy's Hospital, in its favour. That gentleman considers that one object thus attained is the providing an interval of repose (by diversion of the stream of urine) for the diseased urethra, during which irritation or other diseased action has so far subsided, that the patient has been known to recover perfectly without any more serious interference on the part of the surgeon. The circumstances of the case must always determine the site of the operation; but where it is admissible, and the relief required is only of a temporary kind, the puncture per anum is preferred. This method was adopted in a case published in the *Philosophical Transactions* for the year 1776, which proves that the canula may be withdrawn immediately after the evacuation of the bladder with perfect impunity, and without risk of dangerous extravasation; on that occasion the patient perfectly recovered. The author did not insist upon the universal adoption of puncture in preference to the practice of perineal incision, whereby the stricture is overcome at the same time that the bladder is relieved, but the latter operation has often been attempted when the patient's condition was not such as to warrant its performance. When there is great exhaustion of vital power, or where the local distress is very urgent, puncture is usually a safer, and therefore a better, mode of proceeding. The author protested against the hazardous and very unscientific practice of forcing an instrument through the substance of an enlarged prostate, where it constitutes an insurmountable barrier to the onward progress of a catheter.—*Dublin Medical Press*, April 11, 1849.

[What are the bad effects actually found to result from perforation of the prostate in such cases? Why is it more unsuccessful than puncture of the bladder?]

265.—*Femoral Hernia — Rupture of the intestine during the application of the Taxis.* By Mr Nathaniel Ward.—A washerwoman, æt. fifty-two, came under his care in the London Hospital, on March 8, with a left femoral hernia, which had been down two days. According to her account, attempts at reduction had been made on the day following its descent, and persisted in for about half an hour, and also on the subsequent day for about a quarter of an hour. The operation was performed almost immediately after her admission, without any attempt at the taxis having been made. The hernia was reduced without the sack having been opened, and the only point of interest during the steps of the operation, was the existence of about an ounce of opalescent fluid between the sac and its immediate investment, the former presenting a polished smooth surface, and, from being extensively congested, resembling the appearance of the gut itself. A dose of opium was given on the night of the operation, and the bowels acted in fifty-two hours, an injection and some small doses of saline aperient medicine having been administered several hours before. She progressed favourably till the afternoon of the third day, when intermittent pulse, clammy skin, and general prostration of the powers, brought on a fatal termination in the evening. In the post-mortem examination there existed no appreciable evidence of peritoneal inflammation; the sac of the hernia had not been in any way interfered with; and the fold of intestine which had been protruded lay near the mouth of the femoral canal. A whitish indented band passing round its neck, pointed out the tightness of the stricture, and was more obvious internally than elsewhere. Running along the middle of the convex border of the gut, in a line with the long axis, existed a rent of the serous coat about an inch long, and in the middle of the rent the mucous and

muscular tunics had become perforated by a rounded aperture, about one-fifth of an inch in diameter, extravasation of the contents of the intestine having taken place into the peritoneal cavity.

That the rupture of the peritoneal coat had taken place during the attempts made at reduction, was evident from its extent, compared with the perforated opening of the mucous and muscular tunics, which had not given way till the third day after the operation, the patient having progressed favourably till that period.

The effusion of fluid between the sac and its immediate investment was also, in all probability, the result of the previous manipulation. The case suggested, in a forcible manner, the propriety of a guarded and cautious application of the taxis in cases of femoral hernia, and as far as it was individually concerned, militated against the operation without opening the sac.—*Med. Gaz.*, 13th April 1849.

266.—*Remarkable Disease of the Scrotum.* By Mr CANTON.—A gentleman, aged forty-five, who had always resided in a warm climate, was for several years afflicted with a swelling in the left side of the scrotum, and which had attained, by very gradual enlargement, the size of a small melon; producing no further inconvenience, however, than what arose from its bulk and weight. During its growth it had occasionally been struck by the pommel of a saddle. The tumour was oval, extending to the external abdominal ring, and the spermatic cord was obscurely to be felt behind; the testicle was nowhere to be distinguished; the surface uniform, and the scrotum natural and unadherent; freely handling the tumour produced no pain or uneasy sensation; no impulse was to be felt on coughing; the patient could not call to mind whether the swelling had commenced from above or below; translucency and fluctuation were absent; pressure made at the back, and towards the lower part of the tumour, elicited no pain. A small portion of the anterior surface was found, on careful examination, to be more yielding to the touch than the remaining part, and the sensations experienced were those of softness and elasticity. In consultation with Mr Hancock, it was agreed that the case was one of long-standing hydrocele, with the tunica vaginalis considerably thickened; and a trochar was consequently passed into the tunic through the fore-part of the tumour, at its least resisting part. There flowed at once through the canula, a thick, unctuous, brown fluid, which was found to coagulate by heat. The size of the tumour remained the same as before the operation. A few days afterwards, a considerable amount of lighter coloured fluid was drawn off, and at the next visit it was determined to lay open the sac, and endeavour to promote the formation of granulation by filling up its cavity with lint. An incision was accordingly made, extending from the upper to the lower part, through the cyst, the walls of which were nearly an inch in thickness; the testicle was now seen within, and situated lower down than in ordinary hydroceles, and appeared to be in every respect healthy. The patient suffered much from nausea, sickness, and constitutional irritation. At the expiration of a few days, these symptoms having abated, and the interior of the sac being found in a sloughy state, it was deemed advisable to remove, by the knife, the whole of the disease,—a fear being entertained that otherwise, from the indifferent state of the patient's health, the sloughing might extend, and in so doing, involve other parts; whilst the low organisation of the sac gave little encouragement to the hope of obliteration being effected by granulation, and, at the same time, the patient was urgent in his desire to be speedily free from disease. Under these circumstances, Mr Canton carefully dissected the cyst,—which was almost as consistent as cartilage,—from the fore-part of the spermatic cord, and from around the testicle, so as to leave the latter, which was perfectly healthy, unencumbered, and suspended by the former. No part of the scrotum was removed, and, at the close of the operation, the line of incision made in it was so shortened by corrugation, that the testicle could scarcely be returned to its place through the wound. Healing progressed favourably, and the patient has since remained perfectly free from any inconvenience.—*Med. Gaz.*, April 6, 1849.

267.—*Case of Congenital Glossocele, or Hypertrophied Tongue.*—Dr DELANY, of the United States navy, relates in the *American Journal of Medical Sciences*, the case of a young woman, aged twenty, a native of Kittery Point, Maine, who was born with her tongue protruding from her mouth, and from constantly growing, was a disgusting sight to the beholder. She is a finely formed, sprightly, and intelligent girl; has never had any disease save this of the tongue, and a scrofulous ulcer of the submaxillary gland, which discharged for some time, and then healed spontaneously. At the time the surgeon saw her for the purpose of relieving the deformity, the

tongue was protruding (from upper teeth to apex) a little over four inches, circumference seven inches, and thickness at middle of tongue two inches—indeed the tongue was of nearly the same thickness from root to apex. A deep linear fissure occupied the dorsum of the tongue in its whole length. The protruded portion was quite dark, owing to the number of vesicles filled with blood; and the part in the cavity of the mouth was also covered with these vesicles, and enlarged papillæ—but in a lesser degree. The substance of the tongue was extremely hard, and scarcely susceptible of pain; and was constantly pouring out a profuse, viscid, and offensive exudation. The tongue could not be retained in the mouth except for a moment, as it filled the whole cavity of the fauces, and prevented respiration. The inferior maxillary bone was natural in form, except at the symphysis, where the incisors and canine teeth were separated half an inch, and inclined outwards by the constant pressure and weight of the tongue. The lower teeth were covered with tartar, and rather loose in their sockets, and the lower lip everted on the chin. She had never been able to masticate with her tongue in the mouth, and consequently lived mostly upon fluids. She was subject to painful periodical swellings of the tongue, every six weeks or two months, during which time she would almost reach the point of starvation, from absolute impossibility to swallow any nourishment for a number of days. During these periodical turns (which had no connection with the menstrual discharge, the latter being always regular), profuse hemorrhage would sometimes take place from the organ, which at these times looked black. She could make herself understood, though her words were very thick, and given with a lisping utterance. An operation was decided on, and performed in the following manner:—The patient being seated in a chair, her head supported by one assistant, and hands secured by others. The tongue was drawn forcibly outwards and downwards by strong forceps; an incision was commenced with a bistoury on the left side, and carried to the median line a little inside of the upper incisors, then turned and cut outwards; thus with two strokes excising the part, which was of great density and hardness. A formidable jet of blood immediately issued from the dorsal and ranine arteries, which was of course preternaturally enlarged. An effort was made to control the hemorrhage by torsion, which failed, as the arteries were so impacted in the surrounding substance, that they could not be drawn out. Compression was quite as unsuccessful; dossils of lint, wetted with iced alum water, were no better, and the dorsal and ranine arteries were tied without trouble, and thus effectually stopped the hemorrhage. The patient all this time suffered so little pain, that the moment the arteries were secured, she jumped up and ran to the mirror, to see the effect of the operation. The ligatures were cut off close to the knot, hoping that in their course outwards the suppuration might tend to lessen the great thickness of the tongue. The flaps were now brought together (the coagula having been carefully removed with iced alum water), and secured with four interrupted sutures. When this was done, the tongue was of good shape, and no point of cut surface remained exposed. Length of tongue removed two inches and three-quarters. For nine hours after the operation, the tongue remained within the mouth; inflammation and swelling then set in and protruded it. The only dressing applied was a dossil of lint, wetted with ice water. There was no secondary hemorrhage. On the sixth day three of the sutures were removed, and on the twentieth, complete union had taken place by the first intention. The turn of periodical inflammation had come round by this time, and the tongue became slightly swollen, and the submaxillary gland of the left side very much so. The application of half a dozen leeches, with saline purging, quickly subdued this attack. The patient had been put upon the tincture of iodine, and it was continued with benefit. Five days after the operation, the patient, for the first time in her life, chewed with the tongue in her mouth. It is now kept within the teeth like any normal tongue; and protruded with slight difficulty. The exudation was very trifling—not sufficient to afford the slightest inconvenience, and altogether deprived of unpleasant odour. Ten days afterwards there was occasion to remove the lower incisor teeth, their horizontal projection having caused ulcers in the lower lip, which has now assumed its natural position, and completely closes the mouth.—*Med. Times*, Dec. 30, 1848.

268.—*Case of Diseased Larynx, in which Tracheotomy was three times performed, and a portion of Necrosed Ossified Cartilage was coughed up from the Bronchus, through the Artificial Opening.* By E. Humby, Esq., M.R.C.S.—T. H., aged 53, passed the greater part of his life at sea, or in the West Indies. In April 1845, having had syphilis two years previously, he took mercury to relieve secondary pains. In July, severe catarrh was accompanied by pains, sore throat, loss of

voice, and dyspnœa. Active antiphlogistic treatment proving unavailing in relieving the last symptom, tracheotomy was performed, and a silver tube worn for a month. This was then dispensed with for three weeks, but the recurrence of dyspnœa required its re-introduction. Mercury was then rubbed in; the patient was kept in a room supplied with a constant jet of steam, and iodine was given internally. In July 1846, the difficulty of breathing increasing, it was determined that the opening should be enlarged, and a wider tube introduced. This was effected with difficulty, by Mr Liston, in consequence of ossification of the rings of the trachea, which the bone forceps were required to divide. In October following, Mr Humby first saw the patient. He was then suffering from constant cough, mucopurulent expectoration, great constitutional excitement, with physical signs of mischief in the lungs. On November 14, Mr Liston cut out a second piece of ossified trachea; and, in a fit of coughing which followed, a large piece of necrosed ossified cartilage (apparently a part of the cricoid), was coughed up. The patient died six years after this operation.—*Autopsy.* The right pleural cavity contained three pints of turbrid serum, with lymph. The left lung was partially consolidated. The upper part of the larynx was nearly closed, the back of the cricoid cartilage was absent, the rings of the trachea were ossified; and in the left bronchus was a fragment of necrosed ossified cartilage. The principal points of interest in the case are, the great difficulty attending the operation, and the ejection of the dead bone from the bronchus.—*Royal Med. Chirur. Society*, June 26, 1849.

269.—*Successful Employment of Conium in a case of extensive Ulceration of the Perinæum.* By Mr LLOYD.—A man, æt. 22, presented a large venereal ulcer in the left perinæum. The surface of the sore was dull and livid; the discharge thin and watery, without the appearance of pus. Its edges were irregular, hard, and overhanging the surface. The ulcer had been situated in the perinæum for five months. Mercury, iodide of potassium, cauterization, &c., were tried without benefit.

The conium was begun on May 30, and continued without intermission, the dose being increased every four or seven days, until September 18th, when the sores were healed. During this period (112 days) the patient took fifty-seven ounces and two drachms of conium; the first and smallest dose being fifteen grains of the extract daily, while the largest was seven drachms daily, and which was continued for seven days.

The effects of the drug were sensations of fulness in the head, accompanied by giddiness and heaviness of the eyes, on account of which he often found it difficult to read. He said it used to make him feel as if he had been smoking a large quantity of tobacco. These sensations were most apparent when the dose was increased, and they invariably diminished as he got accustomed to the quantity taken, which was the case in four or five days. He never experienced any decided inconvenience from the medicine; it did not make his head ache, interfere with his appetite, disorder his intellect, nor did it make him sleepy. But while he was taking it he gained health and strength, and improved in general appearance. Slight relaxation of the bowels occasionally took place; this was always cured by chalk without opium, the hemlock being given at the same time. Simple ointment was the only dressing applied to the ulcer. That the extract was of good quality was shown by its exhibition to other patients, on whom it produced the usual effects of the drug.—*Med. Times*, Jan. 6, 1848.

[The employment of conium in obstinate venereal ulceration is not a new proposal, as may be seen by reference to the works of Hunter, Pearson, and Travers, who speak favourably of its internal administration in this disease. Since the publication of the above, Mr L. has obtained similar success with the conium in two more cases of obstinate venereal ulceration. It is true, as Dr Christison has observed, that the doses of the preparations of hemlock are not well determined, but the extract employed by Mr L. must certainly have been of very inferior quality.]

IV.—MATERIA MEDICA AND THERAPEUTICS.

270.—*On large Doses of Sub-Nitrate of Bismuth in Gastro-Intestinal Affections.* By M. MONNERET.—M. Monneret states that he has been for some years engaged in experimenting upon the medicinal qualities of this substance, and he finds that, given in far larger doses than are supposed to be permissible, it is of the greatest value in gastro-intestinal affections, especially those attended with fluxes.

Simple Diarrhœa.—It is especially in the diarrhœa of infants, resulting from

impossible to state this, that she has found it so very useful, large doses causing such a few days' loss, often, after warning, and the injudicious diet so often adopted, the bismuth, in doses of three tea-spoonfuls a-day, soon removes all symptoms of disordered digestion, especially the serous diarrhœa so often produced in these cases. Simple diarrhœa is of much rarer occurrence in the adult; still, examples are met with in which we cannot attribute it to either phlegmasia or ulceration of the intestines, as in the granular disease of the kidneys, in chlorotic women, in women become anemic from cancerous degeneration of the uterus, and in some cases of chronic disease of the heart, or in commencing phthisis. Those cases in which the diarrhœa is serous, and results from an atonic state of the gastro-intestinal membranes, best yield to this medicine. It should be given in gradually increasing quantities from two drachms to twelve or more daily.

Diarrhœa Symptomatic of Intestinal Lesion.—In spite of the presence of symptoms indicative of inflammatory action, the author has frequently administered the bismuth to children with great success. So, too, he has found it very useful in some subjects of phthisis suffering from obstinate colliquative diarrhœa, and even in the diarrhœa of typhoid fever, when the intestinal canal was certainly the seat of very numerous ulcerations. In this last case its utility is not very permanent; but it has the advantage of inducing the tolerance of articles of diet or medicine, which without it would be rejected.

Cholerine.—The frequency with which gastro-intestinal disturbance precedes true cholera is well known, and the desirability of its suppression is evident; and to this end large doses of bismuth succeed better than any other means. It is most suitable in the cases in which with the diarrhœa there are nausea, vomiting, gastralgia, colliky pains, borborygmi, and anorexia. The cases are innumerable in which the author has been enabled rapidly to relieve these symptoms, without any aid from opium, by giving eight or ten drachms daily. The only inconvenience resulting is a certain amount of constipation.

Gastralgia.—Various observers have already admitted the great utility of this substance, both in idiopathic gastralgia and in the forms dependent upon hysteria, hypochondriasis, chlorosis, &c. &c.; but it has frequently failed in the hands of others, by being given in doses of two or three scruples daily, in place of twelve or fifteen drachms; and it is taken with such ease, that the patients voluntarily continue its employment after the pain has ceased, until the gastro-intestinal functions are thoroughly re-established. The idiopathic forms of gastralgia, so often met with in sedentary or literary persons, and in those suffering from depressing emotions, or from abuse of alcohol or coffee, are those which are most successfully combated. It has often, too, enabled the stomach to bear those tonic aliments, whose slow and painful digestion, accompanied by cephalalgia, drowsiness, and pain in the back and limbs, is so often observed in chloro-anemic patients. This medicine only produces a temporary relief in gastralgia, dependent upon organic disease of the stomach, except when this viscus secretes a large quantity of acid fluid.

Vomiting.—Vomiting may depend upon a simple gastric neurosis, and then the bismuth can be very usefully employed. It is also useful in the vomiting of pregnancy, and that accompanying dysmenorrhœa; but its efficacy is less certain than in affections of the gastro-intestinal tube, and is never so great as when diarrhœa, colic, and flatus are present. From whatever cause pain manifests itself during digestion, we may relieve it by mixing the sub-nitrate freely with the articles of food.

Administration and Action.—It should be given in powder, and best so with the first spoonful of broth or gruel. It excites no disgust, especially if placed between two bits of bread, soaked in broth. Children take it readily with milk or ptisans. The author has never given less than from two to three drachms daily, nor more than twenty, and he has never observed the slightest inconvenience from these large doses; and it is his custom to give it to the children in his hospital by spoonfuls or table spoonfuls, without observing more exactitude, so innocuous is it. So imperfectly is this fact known that the chemists hesitate in preparing his prescriptions in which these large doses are ordered. The author cannot conceive why this substance was ever set down as an irritant poison, as he has never found the slightest irritation from the largest doses given to either the healthy or the sick; and post-mortem examination proves that, beyond patches of black discoloration, it produces no effect on the mucous membrane, the consistence of this remaining quite normal. The action of the substance on the canal

seems to be quite negative—that is to say, the anormal symptoms for which it was prescribed quickly disappear. Great attention has failed also to detect any marked effect upon any other part of the system. Perhaps the urine is somewhat increased, and the pulse becomes slower; this is probably due to the relief of the gastro-intestinal affection. The action of bismuth is, then, purely a *local* one; and this local action, so far from being an irritant one, as so commonly stated, diminishes the activity of the phenomena of which the mucous membrane is the seat. —*Gaz. Méd.* Nos. 15, 16; and *Med. Chir. Rev.*, July 1849.

271.—*On Certain Impurities in Chloroform.* By MM. SOUBEIRAN and MIALHE.—Two liquids are sold in commerce under the name of chloroform, which, although of very different origin, have nevertheless been hitherto considered as identical, and substituted one for the other. However, they exhibit some remarkable differences in their properties; the one derived from the action of hypochlorite of lime upon alcohol possesses all the characters which have been assigned by one of us to chloroform, and which we shall therefore call *normal chloroform;* the other, obtained by the action of hypochlorite of lime upon pyroxylic spirit or methylic alcohol, differs so much from the first that we were induced to submit them to a careful comparative examination to ascertain the cause of this difference.

The chloroform from pyroxylic spirit, which we shall call for convenience *methylic chloroform*, although possessing the same physical appearances as the normal chloroform, has quite a different odour; it is not sweet and agreeable, but empyreumatic and nauseous. Its density is less than that of ordinary chloroform; the latter weighs 1·496, whilst the specific gravity of the former is only 1·413. We may observe that the density of chloroform, fixed by M. Liebig at 1·480, is too low; we have constantly obtained 1·496 at 54° for a perfectly pure chloroform. This difference undoubtedly arises from the presence of a foreign substance which had not been separated from the chloroform, as we shall presently show. Its boiling-point likewise appears to be lower; and, lastly, the inhalation of the methylic chloroform, far from being agreeable and pleasant, produces a general feeling of sickness, followed by a heaviness in the head, and sometimes by vomiting.

These differences led us to believe that they did not possess the same composition, or that the properties of one of them were masked by some foreign substance. On the first hypothesis, it might be imagined that the chloroform, which does not belong to the same chemical type as alcohol, and which is produced by the profound disturbance caused by the action of chloride of lime, might prove to be a different substance according as it resulted from the action upon alcohol which belongs to the ethylic series, or from the reaction on wood-spirit, which belongs to the methylic series. It might also happen that the difference was owing to a weaker or stronger condensation of the methyle, supposed to exist equally in the two chloroforms. To decide this, we undertook some analyses, the result of which will be given subsequently. The second hypothesis supposes the identity of the chloroform, whether it has been formed from alcohol or from pyroxylic spirit; the difference in this case would arise from the presence of a foreign substance. This opinion is better founded; in fact, on attempting to rectify methylic chloroform by successive distillations over chloride of calcium, we found that the salt forming the residue retained after each distillation a certain quantity of a peculiar oil, which was easily isolated by washing with water. By repeated rectification, we were able to obtain a considerable amount of this oil, the proportion of which rose to as much as 30 grms. in 500 in some commercial chloroforms.

This new substance is liquid and of an oily consistence. At first yellowish, it is rendered colourless by a simple rectification; it has a very peculiar and very strong empyreumatic odour, similar to that possessed by the methylic chloroform; it is lighter than water; it began to distil at 185°, but gradually rose to 271°. This rise of temperature during the distillation evidently indicates a mixture of different compounds. It readily took fire, and burnt with a very intensely smoky flame. The presence of chlorine among the products of its combustion, indicated that this body formed a constituent part.

Although rectified several times, the chloroform which had yielded this oil still retained the characteristic empyreumatic odour. We therefore sought for some chemical re-agent, which, without acting upon the chloroform itself, should either separate or destroy the oil it still contained. After some experiments, concentrated sulphuric acid appeared to us most suitable; it produced in the impure chloroform a brownish-red colour, which was the more intense the more oil was contained in the mixture. This colour, which

it likewise produces in a far higher degree with the isolated oil, is due to its carbonisation; so that on distilling impure chloroform with a certain quantity of concentrated acid, we succeeded in obtaining a product which was no longer coloured by this powerful re-agent, and possessed no empyreumatic odour.

We were then able to analyse the chloroform thus purified, and to examine its properties compared with those of normal chloroform. Composition, boiling-point, density in the liquid state and in the state of vapour, were all found to be perfectly alike; and we were able to assure ourselves that there exists but one chloroform, and that that derived from wood-spirit does not differ in the least from the chloroform from alcohol when the precaution has been taken to separate the whole of the oil above-mentioned. However, it must be stated that the complete separation of this oil was not effected; there still remained a minute proportion, so small indeed as to have no influence either on the specific gravity or on the results of the analysis; but it was evident, from the odour which remained after evaporating a sufficiently large quantity of chloroform; and likewise the vessel used to take the density of the vapour, still perceptibly retained the peculiar odour of this chlorinated methylic oil. It is almost impossible to remove the last traces of it; they resist the action of concentrated sulphuric acid, even after long-continued contact.

There are, therefore, not two kinds of chloroform; but the presence of a peculiar oil, produced in the action of chloride of lime upon pyroxylic spirit, is the cause of the differences which they present at first sight. Having established this fact, we now inquired whether during the preparation of chloroform from alcohol a substance analogous to that just described was not produced. Our suppositions were confirmed by experiment. The crude chloroform was first washed with water, then with carbonate of soda, left for a long time with chloride of calcium to remove the water; and lastly, filtered and distilled in a glass retort in a water-bath. There remained in the retort an aromatic liquid, but of an odour different from that of chloroform; but the amount was very small, being not 40 grms. from 20 kilogrammes of chloroform.

This oil differs essentially from that obtained from the chloroform prepared with pyroxylic spirit; it is heavier than water, and has a peculiar acrid penetrating odour, totally different from that of the other. On attempting to determine its boiling-point, we found that, like the former, it consisted of a mixture of different compounds; for the thermometer, which stood at 154° at the commencement of the ebullition, rose to 243°, and the temperature would undoubtedly have risen still higher had a larger amount been at our disposal. All these compounds contain chlorine, as was evident from an examination of the products of their combustion. Although these different substances were not submitted to analysis, everything leads us to believe that they are intermediate in composition between chloroform and one of the known chlorides of carbon.

It is scarcely possible to decide by what reaction these chlorinated oils are produced, no organic analysis having been made; we may however observe, that in the preparation of chloroform from ordinary alcohol, the more chlorinated oil is formed the less chloride of lime is added to the mixture, or that the production of the substance is due to an excess of chlorine.

It results from what precedes, that the chloroform obtained from wood-spirit should not be employed for inhalation, it being impossible to deprive it entirely of its empyreumatic odour; it might be used for liniments, after having been previously rectified over sulphuric acid and chloride of calcium; but the necessity of these rectifications destroys the advantage which might arise from the substitution of pyroxylic spirit for alcohol.

The presence of the chlorinated oil, however small in quantity, even in the chloroform obtained from alcohol, has a very decided influence on the use of this substance. It is to it that must be most frequently attributed the sickness and vomitings caused by the inhalations of chloroform. It is therefore absolutely requisite to distil the chloroform, in order to separate the foreign substance which it contains; and this distillation should be stopped shortly before the end of the operation, in order not to re-form the mixture. The oil contained in the residue then possesses in the highest degree the property of producing headache and giddiness; its action upon the system certainly requires that its physiological effects should be studied.

In conclusion, we may draw attention to a physical property of chloroform, which appears not to have been previously noticed; it is its solidification by spontaneous evaporation. When chloroform is poured upon a double filter of bibulous paper, a great portion of the liquid, from its heaviness and fluidity, quickly passes through the paper; whilst another portion, evaporating rapidly upon the mar-

gins of the filter, produces so much cold as to congeal it into white silky scales, which keep a few instants.—*Journ. de Pharm.*, July, and *Chem. Gaz.* Aug. 1849.

272.—*On Glairine and Glairidine.* By M. BONJEAN. — Glairine is a vegeto-animal matter, produced at the sulphureous spring of Aix, in Savoy. According to M. Duby, who has examined it microscopically, it consists of extremely minute fragments of a plant of an extraordinarily fine, close, undulating tissue, which is insoluble in water, and has the appearance of an animal remain.

Glairine is produced by the immediate action of the air on the sulphureous water, and is deposited on the pavement of the pumps. It retains a large quantity of water, which it does not lose by long exposure to the air; it is not entirely expelled below 104° Fahr. Thus dried, it is quite colourless, completely inodorous, of a horny appearance, and is reduced to about one-tenth of its weight; when water is added to it, it is rendered again mucilaginous, becomes nearly of its original size, but remains inodorous. When dried, and thrown upon burning charcoal, it gives the smell of burnt horn, without any traces of sulphurous acid; and the gases which it yields turn reddened litmus paper blue.

Glairine contains very little nitrogen, and no iodine; it dissolves sparingly in water, alcohol, oil of turpentine, and rather more readily in concentrated acids, from which the alkalis precipitate it in bluish-white flocculi; heat in all cases increases the solvent power of the liquids; it is quite insoluble in ether, which isolates perfectly the small quantity of sulphur which it retains interposed between its molecules; it becomes rapidly of a more or less blackish-grey colour when taken from the water and exposed to the air; but it is sufficient to treat it with nitric or hydrochloric acid, bromine or chlorine, to restore its natural whiteness; sulphuric acid, far from decolourising it, imparts to it the colour of wine-lees; the concentrated alkalis render it green when heated, and the alkalis destroy it; when in water it has but very little odour, but, as soon as taken from it, it acquires a most disgusting smell, which is not dissipated by long exposure to the air, at least while it retains a little water; nor is it got rid of by much washing with cold water, or by long boiling, although in the latter case the greater part of it disappears. Lastly, it becomes perfectly inodorous by thorough drying in a stove, assumes a horny appearance, and is reduced to about one-tenth of its weight.

The author observed that when the sulphureous waters above described become mixed with rain-water, another vegeto-animal matter appears, to which he has given the name of glairidine.

The principal characters of this substance are, that it is of a deep grey colour, instead of being colourless, like glairine; it is inodorous, and remains so even when exposed to the air. Long exposure to the air does not alter its colour; but, if a glass bottle be immediately filled with it, it soon acquires a smell, which in a few days becomes as disagreeable as that of glairine taken from water. If it then be taken from the bottle and exposed to the air, it becomes quite inodorous, and dries perfectly in a few days; on the contrary, it has been shown that glairine does not lose its interposed water till exposed to a heated stove. Glairidine is not decolourised either by an acid or by liquid chlorine. Like glairine, it renders hydrochloric acid yellow, on account of the peroxide of iron which it contains. Water, alcohol, oil of turpentine, and the acids, dissolve a small quantity of it; it is insoluble in ether; it separates sulphur, but in so minute traces that to perceive them it is requisite to operate on a great quantity of the matter. The caustic alkalis do not render it green, either cold or hot. If it be thrown on a filter, it retains a little water, and when afterwards dried on a stove, it loses only two-thirds of its weight. In this state, instead of having a horny appearance, like glairine, it presents a uniform, friable, solid mass, and does not swell in water. The water which runs through the filter is as inodorous as the substance itself, and it contains a very small quantity of zoïodine. When decomposed in a glass tube, it exhales the odour of burnt horn, and yields gases which strongly restore the blue colour of reddened litmus. Lastly, glairidine yielded by analysis very evident traces of iodine, which, as already stated, glairine did not.—*Jour. de Ph. et de Ch.; Phil. Mag.;* and *Pharm. Jour.*, August 1849.

[We have given the above extracts, as some French writers have ascribed to these bodies the medicinal virtues of the springs containing them.]

273.—*The Thermal Springs of Leukerbad.* By DR FORBES.—"The hot springs which give to Leukerbad all its celebrity are more than twenty in number, and all rise either in the village or its immediate vicinity. By far the most considerable in point of size, surpassing, indeed, all the others put together, is the Lorenzquelle, which issues as a fountain in the small

market-place. It is of the invariable temperature of 124° Fahr., and is the warmest. Another of the springs is 120°; another 115°; and some of the smaller ones in the vicinity of the village (no doubt cooled in their transit) are only 99° and 94°. They are perennial, and all of the same chemical composition. The water is colourless and tasteless, contains a moderate proportion of sulphate of lime, a little sulphate of magnesia, and traces of potass, soda, silica, and iron. In fact, but for its heat, it might be regarded as a good drinking water, only rather hard; and it is far from proved that, as a medium for baths, it possesses any advantages over common spring water.

"The following are the principal bathing establishments; the Old Bath; the Werra Bath; the Zurich Bath; the Bath of the Hotel des Alpes; the Poor Bath; and a grand new Bath now building. Altogether there are eighteen or twenty large public baths, varying in size from 8 feet by 11, to 18 by 30, and capable of containing each from 15 to 35 persons; there are also numerous smaller baths, capable of holding from four to six. They are all old-fashioned, without any ornament, extremely dingy, and, though not dirty, certainly dirty-looking; in a word, much as they were a hundred years since, and certainly not very inviting to a stranger. They are little more than three feet in depth, so that the bathers must seat themselves, which they generally do, when they wish to have the whole body covered by the water. All the baths are emptied and filled every day. The water is lowered in its temperature by the addition of cooled water, but as the taps are at the command of the bathers, the actual temperature employed varies considerably. In four different baths in which there were bathers, I found the temperature to be, respectively, 95°, 96°, 98°, 99°.

"In making use of the baths, the usual course followed is to go into the water at four or five o'clock in the morning, to remain in it from one or two to five hours, and to go into it a second time in the afternoon, and remain from one to three hours; making the daily stay in the bath from two to eight hours. The bathers undress and dress in heated rooms adjoining the baths, and always retire to a warm bed in their hotel, for half an hour or an hour, after bathing. They are clothed in very long dressing gowns of flannel or thick linen, reaching from the throat to the feet. Thus dressed, both sexes occupy the same bath. Each person is provided with a small floating table, with a small basket for holding the handkerchief, snuff, books, &c., also for eating off, playing on, &c. At the time of our visit, none of the baths contained more than ten or twelve persons; but we saw and heard enough to enable us to judge of the strange scene they must present when they are quite full; as it was, there seemed great sociality and mirth among the company.

"The ordinary period of a course of bathing, or *cure*, as it is called, is twenty-five days, and for this the patient pays a napoleon; a single bath costs a franc. Two or more seasons are often deemed requisite for a complete cure. The water is used internally as well as externally, sometimes in conjunction with the bath, or sometimes by itself. A course of this kind is only half as long as that of the bath, viz., about twelve or fifteen days, and consists of from two to ten glasses, taken in the morning, fasting, with an interval of ten or fifteen minutes between each two.

"The baths are employed for many chronic diseases, but their greatest reputation is in cutaneous diseases, scrofula, chronic rheumatism, and indolent gout. Of their great efficacy in many such cases, as well as in others of a different description, we have sufficient proof in actual experience; and this is a result that might be fairly expected from so powerful an agency as hot water, when applied in the manner it is applied here. Immersion in a fluid of a temperature approaching or exceeding that of the human blood, for a fourth or third part of every twenty-four hours, during the space of a month or two, *must* produce some important modification in the actual condition of the animal functions; and it would be strange if this modification were not sometimes beneficial as well as sometimes injurious. It could be easily shown, on physiological grounds, how this should be so; as it is known by actual experiment to be so.

"Employed in this manner, hot water, like cold water, as used by the hydropathists, is a very powerful agent both for good and ill; its application, therefore, requires great consideration and caution; but I am convinced that, with such consideration and caution, it, as well as the cold water-cure, may be, and is, productive of most excellent results. The mode of employing the ordinary cold and warm bath in England, that is, their very brief and occasional use, is unquestionably advantageous both in preserving and restoring health; but it is incapable of producing those great and permanent effects, which may be wrought by the prolonged, and, as it were, continuous use of water, whether hot or cold."—*Physician's Holiday, or a Month in Switzerland*, p. 306, *et seq.*

V.—DIETETICS, HYGIENE, AND MEDICAL POLICE.

274.—*On Chicory-Coffee, its History, Manufacture, Adulterations and Means of Detecting them.* By A. CHEVALIER.

History and Manufacture.—The manufacture of a factitious coffee from the roasted root of chicory appears to have been originated in Holland, where it has been practised for more than a century. It remained secret until 1801, when it was introduced into France by M. Orban of Liege, and M. Giraud of Horning, a short distance from Valenciennes.

In a memoir upon coffee by M. Payssé, some details are given on the preparation of chicory-coffee in Holland. These were printed by Parmentiar in the "Annales de Chimie" for 1806, and are as follows:—

"The chicory for this purpose is collected in spring; the roots are conveyed to the manufactory, stripped of their leaves, and washed to remove the soil. They are cut into six parts, and then divided and dried. When dry, they are roasted in great cylinders, like coffee. After the roasting, the chicory is reduced to a coarse powder.

"In Holland this chicory is then mixed in variable proportions with coffee; the resulting product is very bitter, which is considered by the common people to be a very salutary refreshment, which modifies the stimulant action of the coffee. Such a favourable idea has been formed of it, that of late this preparation has been employed alone, without any addition of coffee; and, nevertheless, it posseses no other virtue than that of colouring more or less readily the water in which it is boiled or infused, of communicating to the liquid the bitter taste of the extractive substances contained in chicory, and of being far less expensive than coffee."

M. Payssé adds, that "peas, lupins, beans, beet-root, carrot, &c., have been employed as a substitute for coffee."

The manufacture of chicory-coffee, however, remained for a long time stationary and of little importance; but for the last twenty years it has extended considerably, and has become an object of commerce of great importance. Till within the last few years, it was carried on principally near Valenciennes; but since then manufactories have sprung up in several localities, especially at Arras, Cambray, Lille, Paris, Senlis in Normandy, Brittany, and in England.

The cultivation of chicory, to obtain the root for the purpose of converting it into coffee, has become a source of great prosperity for these districts. The plant requires a deep soil of good quality, and well-prepared; the seed is sown in May, and the harvest takes place in October. Some time before collecting the roots, the leaves are mowed, and cows fed with them. The roots are dug up with a spade, placed in heaps, and covered with straw to preserve them from frost.

The roots thus collected are cut at first longitudinally, and then transversely, in pieces from 5 to 10 centimetres in size; they are then carried into the drying chambers, which are heated with a kind of anthracite which produces no smoke. The roots are placed in layers of about 40 centimetres; they are frequently stirred to prevent them from burning and to facilitate the drying. Four such operations are made in about twenty-four hours. The roots dried by the above process are known by the name of *Cossètes*. They are kept in granaries; but in general sold almost immediately to the manufacturers, who roast them according to the demand. When the roasting is nearly complete, 2 per cent. of butter is added, and a couple of turns given to the roasting machine. This addition is made in order to impart lustre to the chicory, and to give it the appearance of roasted coffee. The substance is then emptied into iron vessels, and after cooling is crushed in vertical stone mills or between iron cylinders; it is then sifted, and during this operation a small quantity of a reddish colouring substance (*rouge brun de Prusse*) is added to give it the colour of coffee. The product is then weighed off, and sold in packets under a variety of names, but very rarely under its own; for instance, among others, *Mocha powder, Ladies' coffee, cream of Mocha, Pectoral coffee, Chinese coffee, Tom Thumb coffee, Polka coffee, and Colonial coffee.*

We have stated that it forms a very important object of commerce; in fact 12,000,000 lbs. are consumed in France, and a large quantity is exported. On consulting the tables of the commerce of France, it will be seen that from 1827 to 1836 there was exported from France 458,971 kilogrammes of chicory-coffee of the value of 321,282 francs; and since this period the amount has vastly increased.

Adulteration.—This substance is very frequently mixed with other ingredients, the means for detecting which consequently vary. We shall briefly notice them.

I. Brick-dust, ochre, and earth may be detected by incineration and determining the amount of ash; pure chicory-coffee furnished from 4 to 5 per cent. of residue; an excess would indicate fraud.

II. Adulteration with coffee grounds. This is carried on upon a great scale in Paris. It is easily detected. A sample of the suspected chicory is dried in a water-bath, and a pinch thrown upon the surface of a glass of water; the chicory almost immediately absorbs the water and sinks to the bottom of the vessel, whilst the coffee grounds remain on the surface.

III. Adulteration with roasted bread, dirt, and remains from vermicelli, &c. This adulteration is generally made with crusts of bread collected in the streets—crusts which are not always very clean. They are roasted or rather burnt in the oven, ground and mixed with the chicory-powder. This adulteration can be detected by iodine water, as the product resulting from the decoction of pure chicory does not strike a blue colour.

IV. Adulteration with roasted acorns, which may be detected by iodine-water and by persulphate of iron, which in such a case strikes a black colour.

V. Adulteration with roasted corn, haricots, and peas, may be detected by means of iodine water.

There is no method as yet known of detecting the adulteration by roasted beet-root and carrot.—*Journ. de Pharm.*, July 1849, and *Chem. Gaz.*, Aug. 1, 1849.

275.—*Determination of the Richness of Milk.* By M. Poggiale.—M. Poggiale has communicated to the Academy of Sciences of France two methods for determining rapidly the proportion of sugar of milk, and he regards this determination as furnishing an exact indication of the richness of the milk itself. Sugar of milk having the property, like grape sugar, of reducing the salts of copper, its quantity may be estimated by means of this reaction.

The testing liquor is prepared by adding bitartrate of potash to a solution of sulphate of copper; a precipitate forms, which is to be re-dissolved by caustic potash. The liquor, on being filtered, is limpid and intensely blue. The value of the testing solution is fixed by a careful determination of the quantity of sugar of milk required to decolorise a known volume of it.

In testing milk, 50 or 60 grammes (about an ounce and a-half), are to be coagulated by adding a few drops of acetic acid, and heating to 40° or 50° C. (100° to 120° Fahr.) The filtered whey is placed in a graduated dropping tube, each division of which is equal to one-fifth of a cubic centimetre (a twentieth of a cubic inch would be the best equivalent in English measure), and it is to be added drop by drop to 20 cubic centimetres (about 7 cubic inches) of the testing liquor contained in a small flask. This is to be constantly agitated and heated after each addition of the whey. When the blue tint has completely disappeared, the quantity of the whey which has been used is noted, and by a simple calculation the proportion of sugar of milk in any given bulk of milk is obtained.

M. Poggiale's second method consists in the employment of the polariscope. He gives a table for calculating the amount of sugar of milk in grammes, from the degrees of deviation observed.

According to his experiments, M. Poggiale states, that a kilogramme of milk contains about 52 grammes of sugar of milk, whilst in the milk of commerce the amount obtained is rarely more than from 38 to 46 grammes.—*Annales d'Hygiene Publique*, July 1849.

[The determination of the goodness of milk by a simple but precise test, is a matter of more consequence than appears from the slight attention which it has received in this country. It is of especial importance in the case of institutions for the reception of children, where milk forms a very essential part of the diet of the inmates. M. Poggiale's process for the determination of the amount of sugar of milk appears to be, *quoad hoc*, precise enough, and sufficiently easy of execution. But, before adopting it as a test of the goodness of milk, we desiderate some further proof of the correctness of his premise,—that the amount of sugar in the milk is a correct index of its goodness. There does not appear to be any proof, that, because the sugar is normal in quantity, the caseine and butter must be so also. In the analyses of the milk of cholera patients, Dr Maclagan found the sugar to be, at least, of average amount, whilst the caseine and butter were almost entirely wanting; and there seems to be no reason why similar disproportions between the constituents of the milk might not arise from unhealthy states of the cows yielding it.

Various methods have been devised for determining in an easy way the goodness of milk. Berzelius proposed to accomplish it by determining the amount of caseine; the proportion of this principle being ascertained by the quantity of a solution of sulphate of zinc of known strength, required to produce complete precipitation in a certain volume of the milk. Trommer adopted, as his criterion, the proportion of cream, which he found to separate more completely on standing when 1 or 2 per cent. of crystallised carbonate of soda in solution had been added

to the milk. Perhaps, for the use of public institutions, where we would suggest that the milk should be regularly subjected to some test of its quality, the simplest method is by the use of an instrument on which it has been thought proper to bestow the title of "Galactometer." This is merely a cylindrical glass vessel, a foot long and an inch wide, graduated at the upper end. It is to be filled up with the milk, and allowed to rest undisturbed for twelve hours. The amount of cream which separates is at once read off by the graduations on the tube, and this forms probably the best criterion of the quality of the milk. Moreover, in such a vessel the most common adulteration of milk, viz., with water, proclaims itself. If there has been any such addition of water as seriously to impair the qualities of the milk, it shows, on standing, two distinct portions,—the upper more opaque and yellowish, and the lower more transparent or blue,—whilst unadulterated milk remains homogeneous throughout.]

276.—*On the Affections of the Maxillary Bones among Lucifer-Match Makers.* By Dr Helft.—Dr Helft, of Berlin, considers, from his investigations of these affections, that they are not attributable, as supposed by some pathologists, to a peculiar and special disposition in these bones to the morbid influences of the vapour of phosphorus. He is of opinion that they originate in periostitis, a view which in his judgment receives support from the observation of similar effects as the consequence of the same morbid conditions of the gums produced by other irritating substances. This form of periostitis, whether it be traumatic or rheumatic, or whether it arise from any other cause, at length implicates the substance of the bone, obstructing or destroying its vessels by exudation or suppuration, and thence follows necrosis with those pathological conditions which have been so fully described by Dr Giest, of Erlangen, although this author has not assigned them to periostitis as the immediate cause.

Dr Helft points out that those only among the workers in phosphorous who are of a scrofulous or cachectic habit, and in whom a morbid state of the gums, or alveoli, exists, are exposed to this particular form of disease, as these conditions necessarily render the periosteum more susceptible of the action of phosphorous vapours.

Dr Helft concludes that rheumatism alone will not produce it, but that the same effects would occur in any other morbid condition of the gums, &c., if exposed to the irritant action of phosphorous vapour. An analogous effect is produced by other irritating substances, as is shown in the almost endemic prevalence of periostitis of the alveoli in eastern countries, which partly arises from the use of tobacco, and partly from want of cleanliness, combined with poorness of diet.

The experiments of Bibra on animals show that phosphorous vapour is capable of causing bronchitis, pneumonia, gastritis, periostitis, exostosis, and necrosis. Professor Rigler, of Constantinople, attributes the endemic prevalence of the disease of the mouth to the employment of strong soap to cleanse the mouth and gums by the Turks, and of late by other orientals. Dr Rigler also informs us that the same disease prevailed extensively among some Albanians who were taken from their mountain homes and subjected to military discipline, with an entire change of diet. That the disease had arisen from these causes was rendered evident by its complete arrest on a return to their usual diet, by the prohibition of tobacco, the frequent cleansing of the mouth with a very dilute solution of mineral acid, cauterising the gums with lapis infernalis, and the adoption of other remedial measures.

From the preceding facts, it is obvious that a diseased condition of the jaw-bone may arise from other causes than the irritant action of phosphorous vapour; and, whatever may be the ultimate decision with regard to Dr Helft's theory, it is undoubtedly of value, as pointing to the due hygienic measures for the prevention, and to the curative means to be adopted for the arrest, of the disease.—*Casper's Wochenschrift*, Aug. 19, 1848, and *Med. Gazette*, May 11, 1849.

LONDON: JOHN CHURCHILL, PRINCES STREET, SOHO.
EDINBURGH: SUTHERLAND AND KNOX, 23, GEORGE STREET.
FANNIN AND CO., DUBLIN; J. B. BAILLIERE, PARIS;
AND ALL BOOKSELLERS.

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

OCTOBER, 1849.

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I.—MORBID ANATOMY, PATHOLOGY, AND PATHOLOGICAL CHEMISTRY.

277.—*Pathological and Chemical Notes.* By Professor SCHLOSSBERGER of Tübingen. (Communicated by the author.)

I. *Acute Exudation into the Pleura, containing Urea and Fibrin of retarded Coagulation—(Fibrin von Spater Gerinnung), cured by Paracentesis of the Thorax.*—Conrad Hahn, from Dusslingen, a peasant aged sixty-six, was admitted on the 7th June 1847, into Professor Wunderlich's clinical ward, on account of an acute affection of the chest: being a man of very circumscribed intellect, and a confirmed drunkard, all that could be ascertained, from personal examination, respecting the commencement of his present ailment, was, that, about four days previous to his admission, he had been seized with pain in the side, cough, and a slight feeling of suffocation. No information as to previous diseases or other functional disturbances in the present attack could be obtained.

On admission, 7th June, complete dulness on percussion, over the entire posterior surface of the left half of the thorax, and anteriorly as high as the third rib; here the sound was muffled, sonorous anteriorly, absence of respiratory sounds —posteriorly, bronchial respiration. Bronchophony and ægophony— considerable dislocation of the heart—left half of the

thorax an inch broader than the right. Pulse 80, feeble. Subjective symptoms in a remarkable degree trifling. June 9th—great increase of the exudation—the heart beats in the epigastrium. June 12—the entire left half of the thorax is filled by the effusion. June 14th—Paracentesis, giving vent to a great quantity of a yellowish fluid, whose peculiar qualities afterwards to be described, will justify the publication of this case. June 15th—Sonorous percussion sound over the entire left breast with the exception of the lower third of the posterior surface; the heart beats again in its normal place. Anteriorly, vesicular respiration; posteriorly, the same mixed with bronchial, particularly at the root of the lung; inferiorly, fine mucous râle, and pleuritic rubbing sound. From this time forward, gradual disappearance of the anormal sounds, and so speedy a convalescence, that the patient was discharged completely cured on the 5th of July.

These are the essential features of the disease derived from the hospital records. With respect to the composition of the pleuritic effusion immediately to be described, it remains to be added that the patient, before the operation, excreted but a small quantity of urine, rich in uric acid and colouring matter, in which, moreover, albumen was *never* to be detected. After the operation the quantity of urine augmented under the use of diuretics.

Now, to the description of the evacuated fluid itself: quantity, 105 ounces,—on its discharge it was yellowish, full of fine flocculi (fein-flockig), and therefore muddy and glutinous; about an hour after, a compact, greyish, opaque fibrine coagulum had been deposited; the supernatant fluid was now almost pure. *After thirty hours rest*, however, a *new* and very *considerable* gelatinous pure white coagulum was deposited, which completely covered the entire inner surface of the vessel (a capacious porcelain bowl); it consisted of a tremulous transparent jelly, impregnated with a great deal of serum, resembling in form a very delicate membrane. Examined under the microscope, it was seen to consist of a completely amorphous transparent material, containing colourless cells and granules, isolated and in groups, not a trace of coloured blood-corpuscles, but two or three solitary globules of fat.

The fluid pressed from this coagulum of so late formation, had a pretty strong alkaline reaction, and coagulated on boiling in thick flakes; it contained albumen to the amount of 5·52. After the separation, by repeated boiling, of all the albumen from this fluid, diluted with water, an alcoholic extract was made from the concentrated residue of filtration; and from this crystals were obtained by oxalic acid, which were determined, both microscopically and chemically, to be those of the oxalate of urea. In the same fluid from which the albumen was separated, nitric acid detected colouring matter of the bile. Nevertheless no bilin was present.

What is the signification of this second jelly-like coagulum so essentially different from the first, in being first deposited after thirty hours exposure to the air? By reagents it was discovered to be a compound of protein—whether it were fibrin or coagulated albumen, is, in the present state of our chemical knowledge, not discoverable, as we possess no certain distinguishing characteristic between the two; and though the newer pathologists imagine themselves capable of distinguishing with such certainty between these two substances, yet such a proceeding seems to me wholly without support in chemistry, even though attempted by a Rokitansky.

For this late coagulating substance, the name pseudo-fibrine has been proposed. Virchow was the first to call it fibrine of late coagulation (von spæter gerinnung). There is nothing in a name, yet a peculiar nomenclature seems desirable, for this reason, that the attention is by such soonest attracted to a thing but little understood. If the substance be really fibrine, why is coagulation so retarded? if it be albumen, whence comes its—at least apparently—spontaneous coagulation? Our present knowledge is, I believe, insufficient to enable us satisfactorily to answer this question. This can only be possible when many similar observations have been collected and compared. The formation of acid (lactic acid, perhaps—Scherer), was not perceptible in the foregoing case; the fluid was, both at first and afterwards, tolerably strongly alkaline. A bare possibility—but as such only I broach it—is that the admixture of urea in a discoverable quantity might delay the coagulation of one portion of the fibrine, perhaps in the same manner as many neutral salts, or particularly many alkaloids (Magendie), chemically resembling urea. Since cases of *hydrops fibrinosus* are not so very rare, I would beg to direct the attention of physicians to two points—1st, If in similar exudations with fibrin of retarded coagulation, urea is frequently or constantly present; 2d, and particularly, the direct experiment, viz., the addition of urea to such fluids when removed by operation. The cause of the presence of the urea in the acute exudations, I must leave undecided. The existence of Bright's disease

was not improbable, but the urine during the whole course of the disease never contained albumen, and the paracentesis has, at least for the present, rendered post-mortem examination impossible, and postponed it *sine die*.

II. *Analysis of a Phlebolite.*—I received from staff-physician Dr Klein, a true phlebolite, the size of a bean, which he had himself removed from the body of a young man, aged twenty-two years, in whose right vena vesicalis the concretion lay quite free. As but few chemical examinations of such concretions are on record, and these chiefly qualitative, a repetition of the analysis seemed to me not entirely useless. The stone was roundish, composed of not very evident yellowish, white, brittle layers, and having a small hole in the centre; no external cuticular coating could be discovered.

The cementing material seemed to be a protein compound (was dissolved by acetic acid, and rendered violet by concentrated muriatic acid).

The examination was conducted after the method recommended by v. Bibra, in his work on the analysis of bone (1844, p. 118), and gave the following result in 100 parts:—

Phosphate of lime,	50·1
Do. magnesia,	13·7
Carbonate of lime,	8·3
Organic matter,	20·4
Water,	6·1
	98·6

As regards the quantity of the salt of lime present, this phlebolite does not vary much from many human bones (Frerichs, v. Bibra, &c.); but it differs much in its containing so much phosphate of magnesia, which in human bone rarely exceeds one per cent. On the contrary, according to Enderlin's analysis of the ashes of the blood, seven parts of phosphate of magnesia are present to thirty-six parts of phosphate of lime; and in the concretions of many other organs, the intestines, bladder, &c., such collections of salts of magnesia are very frequent.

278.—*Sugar found in the Blood, Tissue of the Kidney, &c., but not in the Spleen and Pancreas, of a Diabetic Patient, who died suddenly.*—M. Bernard lately examined the body of a diabetic patient, under the care of M. Rayer, who died suddenly on the third day after admission into hospital. The urine, drawn off while the patient was yet warm, contained a large quantity of sugar. The liver, mis-shapen, and much larger than in the natural state, contained also a large proportion. The kidneys were also enlarged; the left kidney weighed 245 grammes (nearly eight ounces), and the right 235 grammes (seven and a-half ounces). On washing the tissue of the kidneys, sugar was obtained, but in a much smaller quantity than from the liver. The pancreas and spleen were diminished in size, and contained none; nor was there any in the nervous centres. The blood contained large quantities of sugar, from whatever part it was taken. M. Bernard, in calling to mind a case, in which the serum of the blood, left to itself, became acid by the decomposition of sugar, remarks that this bears on a circumstance in the present autopsy. Sugar was found in the serosity which filled the pericardium; but this same alkaline serosity, when removed from the pericardium, became acid in consequence of the decomposition of the sugar. The intestinal and gastric juices, which seem remarkably fitted for the decomposition of sugar, contained none. M. Bernard has met with sugar in the semen of a goat, which had been artificially rendered diabetic. It is interesting to know that, in cases where the tissues and fluids of a diabetic patient can be examined after sudden death, sugar may be found in the blood, liver, and kidneys. The difference in the reaction of the fluids, hitherto referred to the cause which produces the diabetes, are seen to be dependent merely on the decomposition of the sugar.—*Gaz. des Hôp.*, 10th July 1849; and *London Jour.*, Aug. 1849.

II.—PRACTICE OF MEDICINE.

279.—*Intercostal Neuralgia, with Intermittent Fever.* By MM. Piorry and Legendre (Hôpital de la Pitié).—The authors relate three cases in which intercostal neuralgia of the left side existed in connection with attacks of intermitting fever, occurring several times in the course of the day. All the attacks were in females, subject, for a longer or shorter period, to hysterical seizures, but without any marked visceral disease. In particular, the spleen (which has been so frequently asserted by M. Piorry to be constantly enlarged in intermittent fever) was of the normal volume (three inches in length), as ascertained by percussion. The pain was acute, and great tenderness was manifested on drawing the finger

along *the inferior border* of the ribs in the left lateral region. In one of the cases sulphate of quinine was given for two days, but without effect, and the cases were, on the other hand, much benefited by blistering, or the local application of chloroform, together with the use of baths.

M. Piorry explains the connection between intercostal neuralgia and intermittent fever, in the following manner:—The intercostal nerves communicate with the great sympathetic nerve; and when the diseased filaments terminate (*aboutissent*) in the splenic plexus, they disturb the function of the spleen without altering its volume. In like manner, adds M. Piorry, if the intercostal filaments communicate with the eighth pair, they produce disturbance of the functions of this nerve, and cause the *globus hystericus*.

M. Piorry directs particular attention to the fact, that sulphate of quinine is useless in those cases, *the spleen not being enlarged*. [We think this insufficiently proved in the cases before us, the medicine having only been administered for two days, and that only in one of the cases.] He maintains, that wherever intermittent fever is connected, as he asserts it almost invariably to be, with enlargement of the spleen, the disorder of this viscus is to be considered as its cause, and the sulphate of quinine proves remedial by directly reducing the organ to its normal proportions. But where the fever depends, as in these cases, on a secondary nervous disorder of the spleen, the specific power of the quinine cannot be brought into action.—*Gazette des Hôpitaux*, July 12, 1849.

[We cannot regard this attempt to bring these anomalous intermittent fevers within the order of M. Piorry's favourite *splenopathies*, as altogether successful. It is obvious that his opponents might say here, as they do with regard to the more ordinary cases, that he inverts the order of events; that the irritation of the splenic nerves was indicative of a functional disorder of the spleen (*splenopathie*), *caused by* the intermittent fever; and that this nervous disorder, to which the patients, from their hysterical tendency, were probably predisposed, was communicated secondarily to the intercostal nerves. At all events, it is clear that M. Piorry has himself, by the detail of these cases, destroyed the force of his own assertion of the invariable connection of hypertrophy of the spleen with intermittent fever as its cause. Had M. Piorry, in the numberless debates on this subject in the Academy of Medicine, admitted that functional disturbance of the spleen, or of its nerves, might co-exist with intermittent fever *without* increase in the size of the organ, he would have been at one with many of his opponents as to observation, although his theory would have lost one of its main pillars of support. The frequency of the connection between splenic derangement and intermittent fever, is not doubted by any physician of experience; and much credit is due to M. Piorry for the labour he has bestowed on the investigation of this subject. But the question still remains, Which is the cause and which the effect? and this question M. Piorry has repeatedly answered by the assertion, that an enlargement of the spleen is *always* to be discovered, by percussion, in *every stage* of the affection, and therefore must be looked upon as essential. Any denial of this proposition, any assertion of cases in which the hypertrophy of the spleen was absent, was met by the retort of imperfect observation, and incapable diagnosis. Yet here we have M. Piorry himself admitting the existence of such cases, without appearing to consider how much they affect the stability of the theory of which he has been so long the confident and exclusive supporter.

We may remark, that it is not very clear that an intercostal neuralgia of the left side should, on anatomical grounds, be ascribed to an affection of the splenic plexus, rather than any of the other portions of the cœliac plexus, or even than the renal or mesenteric plexuses, which, like the cœliac, communicate with the intercostal ganglia through the solar plexus and splanchnic nerves. The external site of a pain so communicated is obviously no guide whatever to its seat in an internal organ; and, accordingly, M. Piorry's idea as to the mode in which the spleen was involved in this case, or even the supposition of the spleen being specially involved at all, is a perfectly gratuitous hypothesis. We are led to make this remark the more strongly from having lately seen a case in which a most intense pain of this kind existed in the left lateral region, connected with long-continued intestinal irritation from tape-worm in a very hysterical individual, and where no intermitting fever, nor any trace of splenic affection, had ever existed.]

280.—*Remedies in Infantile Diseases.* By Dr John B. Beck.—[The necessity of minutely attending to the action of those remedies which are most usually had recourse to in the treatment of the diseases of infants, will be sufficiently obvious to all who have watched with ordinary care the occasionally injurious effects of some

of the most important and energetic modes of treatment commonly adopted in infantile diseases. *Opium, tartar emetic, mercury, blood-letting*, and the *application of blisters*, are probably the most efficient remedies in the most deadly complaints of children; but the remedial use of these require considerable acquaintance with what may properly enough be termed the great *impressibility* of the infantile organization, and its consequent great tendency to irremediable derangement, by inconsiderate medicinal treatment.]

Dr John B. Beck, in his short "Essay on Infant Therapeutics," recently published in New York, offers a few very valuable hints and requisite cautions regarding the abuse of these useful agents. For example, in discussing the effects of *opium* on the young subject, Dr Beck probably points out that this powerful medicine acts with greater energy, and at the same time with much less certainty, in infants than in adults, that these facts arise out of the physical organization (more especially as regards their cerebral circulation), also from constitutional peculiarities, and the actual state of disease in infants. From a full consideration of these conditions, and of the fatal consequences attending the misuse of opium, the author urges the following judicious cautions:—1. To avoid its use as much as possible in the young subject. 2. To observe great care as to forms of its administration. 3. To begin its use in very small doses. 4. Not to repeat them at too short intervals. Dr Beck's remarks on the administration of *tartar emetic* are also of practical value; the author properly lays it down as a rule that this drug, which is so often observed to have a very pernicious influence on the young subject, ought seldom or never to be administered to children under one year old, and to others only rarely. *Mercury* he considers abused when given, as it too generally is, rashly as an every-day purgative. *Blisters*, from their great readiness of operation on the very susceptible organization of infants, and their speedily injurious effects, demand extreme caution in their use; and, therefore, the importance of not resorting to their use unless some certain good can reasonably be expected therefrom, is also properly insisted upon by Dr Beck—who also, in his fifth essay, sets before us the great susceptibility of infants to the effects of *blood-letting*. The author more especially protests against the abuse of the remedy in infants, which, he informs us, is a prevalent error in the United States, owing to the great influence of Dr Rush, who advocated its employment, in all diseases, to an injudicious extent.—*Medical Gazette.*

281.—*On Eruptive Fevers without Eruption.* By M. Trousseau.—Some practitioners doubt the accuracy of the facts related by some of the great observers of former times, concerning the existence of eruptive fevers without eruption. They have been especially considered as apocryphal in our times, when the localisation of disease plays so large a part in the nosological systems. But when we consider that all pathologists admit that these diseases attack the mucous membranes as well as the skin, it is obviously improper to consider them as diseases of the skin; and in many cases we observe the eruption to be so very slight, that we can very well imagine it may in others be absent, without the necessity of denying the existence of the disease.

In illustration of such occurrence, Dr Trousseau details the history of a Lilliputian epidemic that occurred in a retired hamlet near Paris. The hamlet only contained three families, of twelve inhabitants, none of whom had had scarlatina. It appeared in a mild form; every one of them was ill, but in different degrees and forms. Eight persons had the rash and angina in their most distinct forms, but four suffered only from severe fever, with angina and desquamation of the tongue. In these the convalescence was tedious, especially in one case where albuminuria followed. Who can doubt that these four were likewise subject to scarlatina, although, had they been presented to the observer in an isolated manner, he being unacquainted with their antecedents, the nature of the case would have been overlooked.

Two facts which have recently occurred in the hospital alike serve to show the possibility of the occurrence of eruptive fevers without eruption, and the difficulty of judging correctly concerning such cases when seen in an isolated condition. A boy, æt. 7, was brought in suffering from croupal cough, laborious respiration, and high fever; an emetic and some small doses of calomel were given, and next day the character of the cough was much better, but there was still much fever and oppression, and auscultation indicated a capillary bronchitis. As the eyes were observed to be somewhat injected and weeping, the tongue red at the tip, and a little blood plugged the nostrils, it was deemed probable that it was a case of measles, but it was only by very diligent search some rose-coloured non-prominent spots could be detected on the

forearms. On compressing the arm, so as to inject these more, their measly character became evident. In a few hours they entirely disappeared, never more to return, "though the entire body of the child was whipped with nettles twice in one day." It is evident that the diagnosis of this disease could not have been made had not the arms been examined just when they were, and that even this small manifestation would not have taken place had the arms been exposed to the cold, instead of enveloped in a warm dress. About the same time a child, æt. 2, was brought in, suffering from a severe form of pleuro-pneumonia, having been ill for eight days. The next day an eruption of measles spread all over the body. No physician, let his sagacity be what it might, could have recognised the measles the first day, and yet it is evident that in this child, as in the other, the rubeolar eruption had predominated on the pulmonary mucous membrane, so as to produce an antagonistic fluxion, preventive or retardatory of, or diminishing, the cutaneous eruption. Such antagonistic fluxions may not unfrequently suffice to prevent all cutaneous eruption, and then we have eruptive fevers without eruption. In scarlatina it is to the mucous membrane of the pharynx and mouth that the critical phenomena are diverted.—*L'Union Médicale*, No. 54.

[We were lately in attendance upon a little boy, in whom the eruption of the skin and the angina were so slight, that we merely at first conjectured the possibility of scarlatina, although subsequent desquamation and the peculiar depression, such as is produced in some children by the presence of its poison in the blood, enabled us afterwards to be quite certain on this point. A brother of the above, æt. 5, from being an active, lively lad, became a moping, dull one, suffering much from lassitude and anorexia. Repeated careful examination discovered not a trace of eruption or angina, and no suspicion of the possibility of scarlatina could have been excited but for the teaching of the other case. Nevertheless in a week or two's time, decided anasarca, with albuminous urine, manifested itself, requiring a long course of aperients, tonics, and baths for its removal.]—*Brit. and For. Med.-Chir. Rev.*, July 1849.

282.—*Dissecting Aneurism, Hemiplegia, and Hypertrophy of the Heart.* By J. R. Bennett, Assistant-Physician to St Thomas's Hospital.—A shoemaker, aged fifty-two, was admitted into St Thomas's Hospital, under Dr Bennett, on February 27, 1849. His habits had been temperate, and previous health good, till within five or six months, during which time he had suffered from palpitations of the heart, vertigo, and uneasiness of the head. Fourteen days before his admission he had an attack of hemiplegia; on his entrance into the hospital he was still hemiplegic, and on examination there was evidence of a greatly enlarged heart, but of no obstruction to the circulation, either pulmonic or systemic; there was a slight diastolic bruit heard just below and to the right of the left nipple, and there only. His general condition varied from time to time till April 21, when the paralytic symptoms became suddenly aggravated. On the 24th he suddenly uttered a cry, indicated that he had a pain in the chest, and died in three or four minutes. Post-mortem examination revealed an apoplectic clot in the left corpus striatum, surrounded by much softening of the brain, and a similar clot in the centre of the pons Varolii, surrounded by white softening. All the arteries at the base of the brain were loaded with atheromatous deposits. In the left pleural cavity there were between three and four pints of coagulated blood, which had escaped through a laceration in the costal pleura, and blood was extravasated beneath the pleura, in the neighbourhood of this opening, and into the posterior mediastinum. On laying open the aorta *in situ* there was found a transverse rupture, three-quarters of an inch in length, immediately beneath the origin of the subclavian artery. Above the point of rupture the arterial coats were not separated for more than a line or two in extent, but from this point downwards, as far as the iliacs, the artery was split up by the blood, which had been forced along between the fibres of the middle coat. Throughout, the aorta and its main branches were studded with atheromatous deposit. The heart was enormously enlarged. The valves and endocardial membrane were healthy, with the exception of a slight opacity of the former; the coronary arteries were healthy. The lungs were healthy. The kidneys pale and mottled. The author remarked on the important chain of morbid phenomena presented by the case, and considered the general arterial disease as the origin of all the structural changes both in the heart and brain. The patient appeared never to have had any arthritic disease, and there was nothing to indicate that the heart or pericardium had ever been inflamed. The hypertrophy of the heart was therefore referred to the loss of elasticity of the aorta, but it was suggest-

ed that the aortic valves might, in consequence of the force to which they were subjected, have allowed some regurgitation, and the existence of a diastolic bruit was supposed to favour such a view. The augmented nutrition of the heart, and the healthy condition of the coronary arteries, was contrasted with the condition of the brain and its diseased arteries.—*Royal Med. and Chir. Society*, June 26, 1849.

283.—*Is Chloroform contra-indicated by Epilepsy?* By Professor SCHLOSSBERGER, of Tübingen.—A young strong-looking student of this University, who, however, had for years been subject to epileptic attacks, but only recurring after considerable intervals,—six or eight months,—breathed, a few months ago, previous to a tooth operation, a tolerable quantity of chloroform—against my will, as I feared its effects on his disease. The chloroform was fresh prepared by myself, the apparatus good, and the inspirations correctly performed; nevertheless, the wished-for anæsthesia was not attained; on the contrary, shortly after this attempt, his epileptic attack came on, much sooner than was to be expected, and in the course of the following three months has recurred thrice. Consequently, the employment of such heroic anæsthetics in epilepsy appears to be at least doubtful, if not dangerous, as far as can be inferred from one case.—(*From the author.*)

284.—*On some of the Symptoms of Typhoid Fever.* By J. B. S. HILLAIRET.—*Double pulse.*—This was first noticed (1707) by Solano de Lucques, a physician practising in Spain. He regarded it as an infallible precursor of epistaxis, and prognosed the severity of the attack from the character of the pulse. Nihell, an Irishman, then at Madrid, became a convert and zealous disciple of Loland, and carried his views to even a greater degree of minuteness. A few years later (1754) Theophilus Borden published a famous work on the same subject, adopting, however, slightly different views regarding the *pulsus dicrotus* as symptomatic of some critical excretion of the superior part of the body, as the chest, throat, or nose. At the end of the eighteenth and commencement of the nineteenth century, Fouquet and other physicians adopted similar views. Since then the state of the pulse, save with respect to mere rapidity, has been too little noticed. No one,—not even Bretonneau, Chomel, or Andral, previous to M. Bouillaud,—has made mention of this pulse as a symptom of typhoid fever. The author, in common with Solano and other observers, has remarked three distinct varieties of this pulse; in the first variety, the second pulsation is scarcely perceptible; in the second variety, the first pulsation is the more feeble; and in the third, both pulsations are of equal strength. The first variety was found only at the commencement of the typhoid symptoms when they are fully developed in patients of feeble constitution. That variety in which both pulsations were equal in strength, occurs in the most severe cases, and after a lengthened continuance of the fever.—*L'Union Médicale*, Août 1848.

285.—*On Inflammation of the Intercostal Nerves (Nevrite Intercostale) in Pulmonary Phthisis, and other Affections of the Lungs and Pleuræ.* By M. J. H. S. BEAU.—Intercostal neuritis is an affection which habitually coincides with inflammation of the pleura, whether simple or combined with pulmonary inflammation. The explanation of this coincidence is found in the anatomical relations of the pleura and intercostal nerves, which are in immediate contact at the posterior part of the thorax. According to the author, the *stitch* in the side, which attends affections of the pleuræ, and most severe pulmonary affections in which the pleuræ are involved, is owing to inflammation of the intercostal nerves, which are found enlarged to two or three times their normal size, adherent to the pleura or to the cellular tissue in which they lie, and, in acute cases, much injected. The degree to which the nerves are affected bears an exact relation to the amount of affection of the pleura, and is therefore evidently secondary to it.

When the lung is attacked by tubercles, it almost invariably happens that adhesions of the pleuræ take place in their neighbourhood. The adhesions, like the tubercles, are at first confined to the summit of the lung, and are attended by the same change in the intercostal nerves as in the case of acute affections, only that the lesion is chronic in its development, and not generally characterised by increased vascularity.

Thus the author explains the dull pains which occur at the summit of the thorax in phthisical persons. Sometimes these pains are sufficiently distinctly marked, and even neuralgic in character; they radiate into the neck and supra spinous fossa, or even along the arm, as in angina pectoris; this divergence being due to the inosculations between the intercostal nerves and those of the cervical and brachial plexuses. But it is not always so, nor can

these pains be said to be even a habitual symptom of phthisis. Nevertheless the lesion of the intercostal nerves is almost always found after death from this disease.

In seeking to explain this contradiction, M. Beau has discovered a symptom, to which he attaches considerable importance in the diagnosis of doubtful cases of phthisis. Even where no pain is manifested under ordinary circumstances, he finds that this symptom may be almost constantly educed by moderate pressure with the finger on the anterior or sternal extremity of the intercostal spaces. In early cases it is limited to the upper part of the chest; and is, generally speaking, more severe in the first space than in the second, in the second than in the third, &c. It varies in intensity, but sometimes is so considerable as to cause an involuntary shrinking on the part of the patient. It is most severe, and affects the greatest number of spaces, on the side in which the tuberculization has advanced farthest.

This symptom is almost constant in phthisis pulmonalis. Among fifteen cases under M. Beau's observation at the time of writing, it was not absent in more than one; and only one of these cases presented the symptom of *spontaneous* pain. The author, therefore, thinks it will prove a useful diagnostic mark in cases where the physical signs of phthisis are masked by bronchitis. The predominance of the pain in the anterior part of the spaces, where the alteration of the nerves is least considerable, is ascribed by M. Beau to the circumstance that, when a nerve is diseased in any part of its course, the morbid sensibility is always referred to its peripheric extremity.

Another form of the intercostal neuralgia of phthisical patients is the pain between the shoulders which has been so frequently described as characteristic of phthisis. In these cases the author has always found that the pain may be traced along the intercostal spaces to the anterior part of the chest. M. Beau had previously endeavoured to demonstrate the connection between intercostal neuralgia and dyspepsia; he now considers both these symptoms as related to phthisis, of which disease dyspepsia, as is well known, is a frequent accompaniment.—*L'Union Médicale*, July 21, 1849; and *Archives Générales de Médecine*, Feb. 7, 1847.

[We think that M. Beau has underrated the frequency of *spontaneous* pain in phthisis. It is not constantly present, or even habitual, in any case of the disease; but we believe that careful inquiry will show, that in few cases does the disease make much progress without manifesting occasionally, and it may be slightly, those flying pains so well described by Dr Watson, and referred by him to casual pleuritic attacks. We are, however, much indebted to M. Beau for calling attention to a symptom so easily ascertained as the one we have described; and, if it be found as constant as the author supposes, it will undoubtedly be a diagnostic mark of no small value.]

III.—PRACTICE OF SURGERY.

286.—*On Cervical Abscesses; the Accidents which sometimes attend their Treatment in reference to Hemorrhage; and a new Operation for securing the common Carotid Artery.* By W. Hargrave, M.B., Professor of Surgery in the Royal College of Surgeons in Ireland, &c.—In the *Dublin Quarterly Journal* for August 1849, there is an interesting paper, by Dr Hargrave, on the above subjects, of which we subjoin the following abstract. Dr Hargrave first notices, under the following heads, cases which have been already published in which hemorrhage followed the opening of cervical abscesses:—

"I. An abscess formed on the right side of the neck in a young child; a peculiar thrill and tremor was observed in it; after much deliberation it was punctured, pus mixed with blood flowed from it, then pure blood; the orifice was closed; the child died that evening. The post-mortem examination exhibited a cribriform communication between the abscess and the external jugular vein.—*Med. Gaz.*, May 10, 1844, vol. ii., N.S., p. 206.

"II. A remarkable case occurred in the practice of the late Mr Liston, who punctured an abscess on the right side of the neck, with which the common carotid artery had communicated. The vessel was secured low down in the neck. The patient dying of arterial hemorrhage on the fifteenth day, the artery was found to have opened into the abscess. In the paper detailing these circumstances, Mr Liston mentions three instances of communications between large arteries and abscesses. Three other examples of arterial openings in cavities of this description have been recorded by Mr Partridge.—*Lancet*, vol. i., p. 864, 1841-2.

"III. An abscess formed spontaneously in the neck five months before death; a

white purulent discharge from a fistulous opening in the supra-sternal fossa remained, from which arterial hemorrhage occurred; it was arrested by compression, but returned on this means being discontinued. The patient sunk in forty-eight hours from the first invasion of the bleeding. The post-mortem examination exhibited an old abscess of a large size, occupying the front of the neck below the larynx, and extending behind the sternum to the right of the arch of the aorta; also a right lateral extension between the right bronchus and arteria innominata to the spine, which, however, was not diseased. The external cellular coat of the aorta and arteria innominata was removed, the fibrous one to some extent; in the centre of it a lacerated opening, about a quarter of an inch long, was found, which penetrated the lining membrane.—*Lancet*, July 11, 1846, p. 44.

"When abscesses form in the tonsils, I have witnessed most alarming hemorrhage follow their opening, even when performed with every care, but in no instance has death occurred. In examining the vascular relations of these glands to explain such an occurrence, they present us with three varieties, two of which will afford such hemorrhage as may or may not be fatal; the third, I presume, will always prove so. Under the first head we find the tonsilitic arterial circle, which, if wounded in opening the abscess, will often give an active flow of blood. The next source from which we should be prepared for a serious loss of blood is the inferior or ascending pharnygeal artery, which creeps to the base of the cranium, close to and external to the tonsil. I feel satisfied that, in one case of very alarming hemorrhage which I witnessed, it came from this vessel. Under the third head the bleeding is from the internal carotid, a wound of which must be almost instantaneously fatal.

"From oral communications with some of my medical friends, other instances have come to my knowledge, not alone of excessive and often returning hemorrhage in the same patient, but in which a fatal termination has followed the opening of purulent collections, the sequelæ to scarlatina.

"From an attentive examination of the abscesses which have been complicated with active losses of blood, I find that the majority of them were in subjects of a more or less cachectic habit, suffering from struma, or bad forms of scarlatina, perhaps also of a cancerous diathesis."

Dr Hargrave then proceeds to relate a case of active bleeding following the opening of a cervical abscess, for which he tied the carotid artery by a new method, which we shall notice after giving an account of the case.

"Patrick Beahan, aged sixty-one, master of a ballast lighter, was admitted into the City of Dublin Hospital, on the 15th of January 1849, under the care of Dr Hargrave.

"Two years previous to his applying to the hospital he had a superficial cancer on the lower lip, on the left side, which was removed by some powerful escharotic, leaving a slight depression evident on the lip, but no trace whatever of cancer or any local affection remained. He had been attending as an out-patient for some weeks, for a tumour occupying the space between the symphysis and the angle of the jaw on the left side. The tumour was rather firm on pressure, and, on careful examination, fluctuation was very evident. It was punctured last Saturday by Dr Hargrave, and a quantity of straw-coloured serum, mixed with scrofulous-looking matter, discharged; a dossil of lint was introduced into the incision; he was directed to poultice it, and, if any occurred, to return on the following day. On Sunday, shortly after twelve o'clock, he experienced a very severe rigor, with intense headache, sickness of stomach, and pain in the tumour; on Monday he came to the hospital in the following condition—the left side of face swollen, with an erysipelatous blush spread over it, and extending to near the left eye; pain in the tumour; some headache; thirst; pulse 92, full and strong; tongue coated; bowels constipated; the dossil of lint was removed from the wound; he was ordered to bed, and a purgative bolus was prescribed.

"From the 16th of January the erysipelas, which had extended upwards over the face to the scalp and eye-lids, and was attended with nocturnal raving, was treated by leeches in small numbers, applied at two different periods, by mercurial inunction, and the internal use of camphor, bark, and aromatic confection; poultices were applied to the abscess, the discharge from which was daily improving in character up to January 20th, when something *like grumous blood appeared on the poultice;* this appearance continued the following day, but was less the one after.

"23d January.—About half-past seven o'clock last night a gush of blood came from the cavity of the abscess, through the lancet wound which was made on the 13th instant; it flowed *per saltum*, was of

a florid red colour, and was arrested by placing the finger on the wound. He was asleep when the hemorrhage first commenced, but it awoke him, and although assistance was at hand immediately on its being discovered, he yet lost a considerable quantity of blood, his shirt, the sheet, and the pillow-cover, being saturated with it. When the finger was removed from the wound, the blood came out in a jet the thickness of the little finger, and was thrown fully a yard distant. A consultation was held, and it was decided that the common carotid artery should be tied. The operation was performed by Dr Hargrave.

"Immediately after the vessel was tied, the patient had two severe rigors, quickly succeeding each other, but of short duration; they were followed by active vomiting of some fluid; there was no alteration of vision. No blood was lost during the operation. The pulse was slow and weak; while on the table he got a glass of wine, and at ten o'clock P.M., eight grains of compound chalk powder, and Dover's powder, were administered to him, his bowels being rather free during the day. He passed a quiet night, with some wandering, but not so much as previously; no headache; some thirst; bowels moved twice; pulse 68, soft and weak; tongue coated and moist; no pain of neck; swelling of face much less, but abscess much larger, the cavity of it being probably filled by coagulated blood; a coagulum occupies the wound in it; surface of body warm. Diet—arrow root, beef-tea, and cool barley water.

"From the morning of the 23d January, the day after the operation, absolute repose was enjoined, warm water dressing was applied to the abscess, which ulcerated in a fresh portion of the skin below the puncture, and discharged large clots of blood. The two openings were then laid into one. The discharge, though of a healthy character, possessed great fetor, caused by disease appearing in the inferior maxilla, which had become deprived of its periosteum, the bone being scabrous and rough. The constitutional treatment consisted in the administration of the syrupus cinchonæ, occasional doses of camphor, with sub-carbonate of ammonia, and opium, and a guardedly generous diet. The case progressed favourably up to the thirteenth day from the application of the ligature, when the report states: 'Feb. 5th.—At about half-past eight o'clock last night some hemorrhage took place from the incision made for taking up the artery; the blood was of a florid red colour, not much in quantity, and stopped of its own accord; after it, his pulse was full, strong, and 92; the dressings, which were not removed, were incrusted with blood; he rested very well during the night, till half-past six o'clock this morning, when hemorrhage again broke out; it came *per saltum* from the dressings, was of a florid red colour, and profuse in quantity; his flannel vest, shirt, and the sheet, were saturated with it as far down as his hips. When the dressings were removed it was arrested by pressure. Pulse very weak and easily compressed; surface of body and feet warm; says he felt a throbbing in his neck before the hemorrhage occurred; tongue rather moist and clean; complains of thirst.'

"I was called to him at seven o'clock, A.M., and but for the clear, intelligent expression of his eyes, would have considered him moribund; he was given some wine and water; a firm clot of blood glued up the wound; the ligature was *in statu quo*. All the parts were kept as quiet as possible, and dressed with matico leaves moistened in hot water, laid thickly over the incision, over which was placed a compress of lint, well saturated with an infusion of the leaf, and secured by means of adhesive plaster.

"From this morning (Feb. 5th), the local treatment consisted in the daily dressing of the wound as just described. The parietes of the abscess were excessively indolent, showing no tendency whatever to granulate; a whitish painless fungus appeared at its internal surface, but it still discharged rather laudable pus. It was cleansed out occasionally with a solution of chloride of lime, and also a weak solution of chloride of zinc, a grain to the ounce of distilled water. It was dressed alternately with Peruvian balsam and compound tincture of benzoin. The constitutional treatment was successfully directed to allay a very harassing cough, by means of gum ammoniac mixture, ipecacuanha wine, syrup of Tolu, &c.

"Feb. 12th.—The report states: 'The ligature came away quite easily in the dressings this morning; some old clots of blood and sloughs also came away with it; no hemorrhage; the incision is granulating. An abscess is forming behind the angle of the jaw on the left side, which part is swollen and painful. In the original abscess there is a quantity of sloughy matter, apparently the remains of the cyst, while anteriorly there is a hard, elastic mass projecting into the opening of the abscess, and presenting the appearance of a gland; the inferior maxilla feels quite denuded of periosteum, and scabrous. The man sleeps well; his appetite is

good; bowels regular; pulse moderate; tongue very clean. To continue the treatment.'

"From the date of the operation to the casting off of the ligature, twenty days and a-half elapsed; subsequent to this his general health continued improving in every respect, but the original local disease showed no great tendency to heal; on more than one occasion, it appeared to me to exhibit something of a malignant character, but was always devoid of pain. Small abscesses began to form, one in the left cheek, giving exit to healthy matter, another in the vicinity of the great left cornu of the os hyoides; while the one inferior and posterior to the angle of the jaw discharged large quantities of healthy purulent matter. As he exhibited some impatience at remaining in hospital, although availing himself of exercise in the garden, it was considered best to comply with his wishes, and, by permitting him to return home, observe the effects of change of air, not alone for the healing of the original, but also to prevent the formation of other abscesses. He was accordingly discharged on the 13th March, the following appearances being then noted: 'The skin was of a livid colour, particularly behind the angle of the jaw, on the neck, below the arterial incision, and also under the chin. The cheek on the left side is much more prominent than the right, commencing near the symphysis menti, extending backwards to the ear, and behind the angle of the jaw, upwards to a line drawn from the angle of the mouth to the meatus auditorius externus, and downwards to the arterial wound. The induration in the tumour is not so great, the parts being infiltrated, as it were, with purulent matter; the ulcerated opening is about the size of half-a-crown, its edges somewhat everted, and at its inferior part is a small eminence growing from the inside of the wound, and covered with a yellowish slough; the surface of its cavity presents a granular appearance of a greyish colour, and its depth is about two inches and a-half; the discharge is rather thin and scanty, of a light yellowish colour, and slightly fetid; when pressure is made under the chin, healthy pus is discharged from the opening. The inferior maxilla is quite rough and bare, and the arterial incision is all but healed. The collateral circulation was beginning to manifest itself; as an artery, perhaps a fifth thyroid, could be observed pulsating and ascending along the mesial line of the neck.

"While preparing this communication for publication, I was informed that this patient died on the 2d of April last. On inquiring from his brother the particulars attendant on his death, and his condition since he left the hospital, he informed me that the ulcer diminished somewhat in depth, also in the circumference, and he never complained of pain in it; he suffered much from cough, and expectorated large quantities of a thin, ropy fluid; his dissolution was calm and tranquil."

One of the most interesting features in this important case is the successful management of the secondary hemorrhage, which took place on the thirteenth day after the artery was tied. As the blood came profusely, and *per saltum*, it would appear to have been from the cardiac side of the ligature. It was first arrested by pressure, of what kind is not stated. The wound was then dressed with matico leaves, moistened in hot water, laid thickly upon it; over which was placed a compress of lint, saturated in the solution, and this was secured by adhesive plaster. After this the same dressings seem to have been daily renewed; and Dr Hargrave thinks it fair to infer that to this method of dressing was due the prevention of the return of the secondary hemorrhage, and he reckons it a valuable and simple application in such circumstances. He has found the infusion of this leaf most useful, as a styptic, in controlling the bleeding in persons of hemorrhagic diathesis.

The *method of operation* practised in this case is new, and is deserving of the attention of surgeons. "A *transverse incision* was first made through the integuments, about two fingers' breadths above the clavicle; the sterno-mastoid muscle was then carefully divided upon a director for its entire breadth, and the sheath of the vessels was easily brought into view, crossed by the omo-hyoid muscle, which was distinctly seen occasionally in action. The sheath of the vessel was next opened, and the aneurismal needle passed under the artery from without inwards; it was then armed with the ligature, the needle withdrawn, and the artery firmly tied: the hemorrhage was instantly arrested, and all pulsation in the temporal artery ceased. No blood was lost during the operation; only one small vein was met with, and that at the commencement of it. The internal jugular vein presented no impediment during its performance."

Dr Hargrave continues, that, by thus cutting completely across the sterno-mastoid, he was enabled to come down upon the artery, "in the easiest way, with a free gaping wound, experiencing no impediment either from the eighth pair of nerves or from the internal jugular vein.

My reasons for adopting this innovation were, the comparative shortness of the man's neck, and in order to obtain a sound portion of the integumentary membranes free from erysipelatous inflammation."

"In the subsequent steps of the operation, this selection proved to be most fortunate, as it was discovered that the blood effused from the artery was extravasated as low as the cricoid cartilage; so that if the usual line of incision had been adopted, along the anterior edge of the sterno-mastoid muscle, the certainty is, that I would have opened into the cavity formed by the effused blood, and would have found it almost impossible to have proceeded with the operation so as to tie the vessel. I would have been inundated with blood, and ultimately obliged to abandon it, and adopt that very unsatisfactory and doubtful practice of plugging the wound with sponges and compresses, to procure, perhaps, but a temporary continuance of life.

"In none of the special works on operative surgery with which I am acquainted are any directions given for taking up the carotid artery as now detailed. I have been for some years in the habit of describing this operation in my lectures on operative surgery; and also of directing the attention of naval surgeons, who have performed a course of operations in surgery under my superintendence, to this operation. From the facility of securing the artery by the plan now proposed, I consider it deserving of a place in the systematic works in this department of surgery, and would term it the *Transverse Operation, or section of the sterno-mastoid muscle for the ligature of the common carotid artery.*"

[It does not clearly appear from Dr Hargrave's remarks whether he would recommend this new method of operating in all cases, in preference to the usual method by incision in the course of the artery, or only in those, where, as in the case above detailed, the operator has very little room. The method cannot, of course, apply to the upper third of the common carotid, but to the two lower thirds where it is overlapped and covered by the sterno-mastoid. In operating by incision in the course of the artery at its middle third, sufficient room may be obtained by pulling the muscle outwards; but opposite the lower part of the vessel, it is necessary to divide, as is usually recommended, the sternal portion of the muscle, when it presents in the wound. In like manner, the sterno-hyoid and thyroid muscles must afterwards be held inwards or divided, in operating towards or at the lower part, in order to expose the sheath. Unless the operator's space be very limited, from above downwards, the advantage of making the incision across, instead of over, the course of the artery, is not apparent, as the division of the sternal portion of the muscle in the latter affords ample room in front of the sheath. Very different accounts have been given as to the interference occasioned, in the operation upon the carotid, by the swelling out of the internal jugular vein. This will depend, in a great measure, on whether the sheath has been opened towards the outer or inner side. In the method of operating by transverse section of the entire sterno-mastoid, the vein is more likely to be exposed; but, in Dr Hargrave's case, no trouble was occasioned by the vein, although the operation was low down on the left side.]

287.—*Removal of a Foreign Body from the Abdomen.* By John G. Kyle, M.D., Ohio.—A boy, two years of age, had become weak and emaciated. When seen by Dr K. there was great abdominal pain and tenderness, and, extending across the abdominal wall, below the umbilicus, a red raised mark, about an inch in breadth, with the appearance of pointing at one end. Fourteen days before, the patient had been badly choked by something, which he swallowed with considerable difficulty; and two or three days afterwards he became fretful, lost his appetite, and had pain in the bowels. Dr K. concluded that some indigestible substance had been swallowed, which had got entangled in some fold of intestine, had passed through its coats, and was now making its way out; and that an operation would be necessary.

A small incision was made midway between the anterior superior spine of the ilium and the umbilicus. The abdominal muscles were divided carefully, and a foreign body was felt under the peritoneum. On puncturing this with a sharp-pointed bistoury, a brown corn straw presented, and was laid hold of with forceps, and extracted. It was three inches in length, and forked near the middle. The wound healed by the first intention, and the boy regained his health in a short time.—*Med. Examiner*, Feb. 1849.

[We may here mention a case which occurred some years ago in this country, and which, although not altogether analogous to the preceding one, is interesting in connection with this subject.

A woman was being tapped for dropsy. To remove some obstruction which occurred in the canula a common probe was

used, and, somehow, it slipped accidentally into the abdomen. After a few weeks passed quietly, an abscess formed and pointed in the groin. The abscess was opened, the probe recovered, and the patient did well.]

288.—*Effect of Ligature of the Carotid Artery on the Brain.* American Committee on Surgery.—"Within a year or two past, attention has been, in a particular manner, directed to derangement of the cerebral functions following ligature of the common carotid artery. These cerebral symptoms are attributable either to cutting off the direct supply of blood to the brain, or to disease consequent upon the altered condition of the circulation in that organ. Nearly one-fifth of the recorded cases of the operation in question are found to have exhibited it in a greater or less degree; and the frequency of its occurrence has been singularly overlooked by practical surgeons. Two cases have been forwarded to the committee by Dr Mettawer of Virginia, in which it was observed. In these the vessels were taken up—in one instance, for an anastomosing aneurism of the antrum and nasal cavities, and the other for a case of false aneurism. Both patients had lost large quantities of blood previous to the operations. In each case partial hemiplegia, of the opposite side to the artery which was ligatured, was noticed in a few hours, and was followed by delirium and convulsions. In one of the instances death occurred on the eighth, and in the other on the tenth day. Autopsic examinations showed softening of the medullary substance in the side opposite to that on which the vessel was tied, while the hemisphere corresponding to it was healthy, though pale and bloodless."—*Med. Examiner*, February 1849.

289.—*Iodine Injection in Spina Bifida.* By Dr Brainard.—The patient, a girl aged thirteen years, had a spina bifida at the upper part of the sacrum, measuring nine inches in circumference, and three in height, with thin walls. Dr B. made a puncture with a lancet half-an-inch from the base of the tumour, and inserted a fine trocar, through which he injected a solution of iod. potass. gr. i., with iod. gr. ½ in ʒj. of water, without allowing the serum to escape. The tumour became red, tense, and tender, but these symptoms soon gave place to flabbiness and contraction. In twenty-five days it had diminished to half its size, when a second injection, half the strength of the first, was thrown in, and some weeks afterwards a third, without any unpleasant result. The fluid had been so far absorbed that the bony margins of the opening could be felt.—*Medical Examiner*, February 1849.

290.—*Hydrocele—Report of American Committee on Surgery.*—Dr March of Albany, after drawing off the fluid by a large trocar and canula, instead of injecting, introduces, through the latter, a camel's hair pencil, dipped in a solution of hydriodate of potass, with which he paints the "whole" inner surface of the sac. He has operated in this way in a number of instances with complete and most satisfactory success, and he believes the method to be a prompt and easy one.

It may be a matter of doubt whether the cures by this method resulted from the action of the solution, or from the brushing merely; and also, whether the method be a more prompt and easy one than that in common use—by the injection of iodine.

In the same report is contained the recommendation, by Dr Horner of Philadelphia, of the introduction of a seton, consisting of four or five silk threads, through the tunica vaginalis from the bottom to the top, in addition to the process of injection.

This is done with the view of allowing effused serum to drain off, in order that the opposite surfaces of the membrane may come in contact.

The recommendation seems to be made under the idea that obliteration of the cavity of the tunica vaginalis, by adhesion of its opposite surfaces, is necessary to a permanent cure; and we fear the author is not sufficiently acquainted with the writings of Pott, Earle, and Green in favour of the seton, or of other authors regarding the disagreeable consequences to which it so often gives rise.—*Medical Examiner*, February 1849.

291.—*On Inflammation of the Epiglottis.* By Mr Kesteven.—Inflammation of the epiglottis is not met with except in connection with, or as the result of, inflammation of the larynx, tonsils, or fauces. It is deserving of particular notice as constituting an intractable and alarming complication of these affections. Its occurrence is not so rare but that it is a matter of surprise that writers on systematic medicine should have passed it over in silence.

The chief source of danger in epiglottitis consists in the insuperable difficulty it presents to deglutition, especially of fluids, as must be obvious from the anatomical and physiological relations of the epiglottis. Not only does this circumstance incur

danger to the patient indirectly from want of support, but directly also, from the impediment which it offers to the influence of remedies.

The two following cases present very distinctly all the most important characteristics of the disease, together with an illustration of the advantages to be obtained in point of treatment by a suitable local remedy over the general measures which seemed formerly indicated, and were acted upon :—

Case 1.—T. E., æt. about fifty years, having suffered in the beginning of January of this year, from a common ulcerated sore throat, which yielded to the usual treatment, experienced a severe relapse after premature exposure to cold. The pain and difficulty in swallowing were greatly increased, and in a few hours any attempt to swallow was followed by a sense of suffocation and a violent paroxysm of coughing. On looking into the mouth, the mucous membrane covering the entire palate and fauces was red and swollen, and presented all the characters of erysipelatous inflammation. When the root of the tongue was forcibly depressed, the epiglottis could be seen erect and swollen, in aspect resembling a ripe strawberry. The tongue was furred ; there was great thirst ; the pulse was 100, but soft.

My attention was immediately directed to the state of the epiglottis by the impossibility the patient experienced in swallowing liquids ; this was also a prominent symptom in the case which I subjoin, and constitutes, as already observed, the diagnostic symptom of inflammation of the epiglottis.

The means adopted in the present instance were suggested to me by the perusal of a treatise on diseases of the throat, by Dr Green, of New York. A solution of nitrate of silver, consisting of one drachm of the pure crystals, in an ounce of distilled water, was applied on a small piece of sponge fastened to the end of a whalebone-rod, and freely applied to the epiglottis and fauces. This was done at about eleven o'clock in the forenoon, and was, as may be supposed, attended by a very severe paroxysm of coughing. A blister plaster was also applied to the neck. The patient was strictly enjoined not to attempt to swallow anything.

At eight o'clock in the evening the symptoms were all greatly relieved ; at ten o'clock of the same evening the epiglottis could no longer be seen, and swallowing was unattended by the distressing symptoms which had been witnessed in the morning. A few more applications of the nitrate of silver removed the inflammatory condition of the mucous membrane of the mouth and fauces, and in a short time the patient was convalescent.

Case 2.—Mrs F., æt. thirty-nine, May 1840 : had been suffering for several days under what had been regarded as ordinary sore-throat. She experienced great pain and difficulty in swallowing, especially in attempting to swallow fluids ; the effort produced a violent paroxysm of coughing, and threatened suffocation. By strongly depressing the root of the tongue, the epiglottis could be seen red and greatly swollen. Leeches were applied to the throat, and afterwards a blister, which was kept open for several days. For three days she swallowed absolutely *nothing*—not even her saliva ; during these, and the seven following days, she was supported by enemata of beef-tea, milk, arrow-root, &c. It was not until after six days from my first seeing her that the inflammatory swelling of the epiglottis began to subside, and not until after the expiration of ten days that she could succeed in swallowing. It was then several weeks before she recovered her strength.

Dr Burn, formerly physician to the Westminster Hospital, once saw this patient, who was related to him, with me, and fully concurred in the treatment adopted. Of this he was a competent judge, having given considerable attention to this rather rare form of disease, of which he had met with several cases, and which he recorded in one of the provincial journals.

These two cases are here collated as good examples of the characters of a not usually recognised disease, and as affording instances of the striking advantage derived from the method of treatment recommended by Dr Green in other affections of the throat and larynx. The gratification with which, in a few hours after the application of the solution of nitrate of silver, all the symptoms were found so notably diminished, afforded a forcible contrast to the anxiety with which, nine years before, in the other case, I had for many days watched the patient's state with little hope of ultimately subduing the disease.

I have subsequently found a similar mode of treatment successful in the sore-throat to which clergymen are so particularly obnoxious. I should not hesitate to act upon Dr Green's advice to use the same means in cases of laryngitis or croup not yielding at once to ordinary remedies.—*Lond. Med. Gaz.*, May 4, 1849.

292.—*Case of Foreign Body in the Bronchi.* By Mr Solly.—This case was communicated by Mr Solly at a meeting of the Royal Medical and Chirurgical Society of London, held on April 24th.

A man drew into his windpipe a pebble which he had placed under his tongue, to relieve thirst while working on a railway. The first surgeon who saw him tried to dislodge it, without effect, by making him stand on his head. On his admission into St Thomas's Hospital, his condition was as follows:—When recumbent and entirely at rest, he was free from cough, and unconscious of the presence of the stone, but much moving about caused severe cough, and the feeling as if the stone changed its position. The attempt to lie on the left side produced great dyspnœa—with cough and impending suffocation; and he referred to the position of the right bronchus, as that occupied by the stone. On examination with the stethoscope, the respiratory sound was loud, but otherwise natural on the left side. On the right there was a loud cooing sound, about four inches below the clavicle, and below this, over about three square inches, the respiratory sound was not audible, although its absence was not constant.

After a delay of a few days he was bound to a table, inverted, and frequently struck by the operator's hand on the chest and back. No effect was produced on the stone, and the dyspnœa and spasmodic cough which it caused, prevented the maintenance of the position beyond forty or fifty seconds. It was then determined to open the trachea, and the patient was again inverted, but without dislodging the stone; and as the introduction of a long steel probe produced violent spasm, without indicating the position of the foreign body, Mr S. did not think himself justified in employing the forceps. Severe bronchitis followed, which was twice subdued by repeated cupping and the use of mercury; and the man left the hospital.

Two days afterwards he was seized with a violent fit of coughing, which nearly produced suffocation, and he declared that the stone had, at this time, changed its position. Expectoration was very profuse during his last week, and he had three more convulsive fits shortly before his death. The post-mortem examination revealed extensive pleuritic inflammation, and suppuration in the pleura of the left side, and abscess of the lung on the right. The stone was firmly wedged in one of the first divisions of the left bronchus, but there was no ulceration of the mucous membrane around it, indicating that it had not been long resident there. It was three-fourths of an inch in length, and half an inch in breadth, and weighed 114 grains.

A lengthened discussion followed the reading of this case. It does not appear clearly whether Mr Solly's object in opening the trachea was to enable the foreign body to pass out, or be extracted there, or merely to set the glottis at rest, so as to allow the stone to be ejected by the natural passage (as occurred in the well-known case of Mr Brunel, by Sir B. Brodie), and at the same time to prevent the fatal effect of a prolonged fit of spasm. Messrs Solly and Arnott believed that the cough which occurred on turning up this patient, was not owing to the stone falling against the glottis. Mr B. Phillips alluded to a case which had occurred, soon after Brodie's, in Edinburgh, in the practice of Dr Duncan, where a shilling, which passed into the larynx, was ejected without coughing, on turning up the patient; and Mr Hewett related a case where a fourpenny piece came up, in a fit of coughing, after inversion of the body had failed to dislodge it. In this case the stethoscope did not indicate the position of the foreign body, but an operation was to have been performed on the day after it was coughed up. Mr Arnott was acquainted with a case in which a coin was lodged in one of the bronchi. Tracheotomy was performed. The forceps gave the body a turn round, when a fit of coughing caused it to be ejected (we presume) by the wound. Mr Erichsen referred to a case, related by Mr Cock, in Guy's Hospital Reports, in which a sixpence passed from the air-passages during sleep. Tracheotomy had not been performed. Mr Coulson thought that in Mr Solly's case the forceps should have been used, and that, although the respiratory passages were involved, chloroform might have been employed to prevent the spasm. —*Medical Times*, May 12, 1849.

293.—*Fracture of the Penis.*—"A young man, native of Canton, applied to Dr Parker for relief. He had been married about eight months. On the nuptial night he met with an insurmountable difficulty in his attempt to establish sexual intercourse with his bride, and in an effort on that occasion, sustained a severe, and, most probably, irreparable injury, which caused great pain. Since that night erection of the penis is limited to about half an inch of its root, the extremity of the organ, with its glans, hanging flaccid.

On examination, a well defined, transverse space, through the corpora cavernosa,

about half-an-inch from the pubis, the site of fracture, was found to separate the penis in two parts.

No attempt was made to remedy this serious misfortune."—*American Journal of the Medical Sciences*, April 1849.

IV.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

294.—*Anæsthetic Midwifery*—DR DENHAM'S *Report*.—Dr Denham, ex-assistant physician to the Dublin Lying-in Hospital, reports upon the use of chloroform in fifty-six cases occurring in that institution. Dr D. assures the Dublin Obstetrical Society, at which he read his report, that at the request of Dr Shekleton, the present master, he conducted his experiments and made his observations "without the slightest intention of making out a case either for or against the use of chloroform,"—a frame of mind especially required in any attempt to remove from this "apple" of obstetric discord the truth-concealing evils which preconceived notions as well as absurd prejudices are so apt to engender.

Dr Denham defines anæsthesia as "a scientific form of intoxication, the effects of which very soon pass away," saving the parturient patient a certain amount of pain, and lessening the shock consequent on the birth of the child—this not only being a present advantage, but an effect which also generally exercises a happy influence on the ultimate recovery of the patient. In speaking of the immediate danger and the remote ill effects which some would have us to believe are always more or less incurred by the administration of chloroform during child-birth, Dr D. remarks, that "it is a remarkable fact, that scarcely one well-authenticated immediately fatal case in midwifery practice has yet been recorded—certainly not one has occurred in this country, nor have we witnessed any very alarming symptoms directly traceable to its effects, when administered for this purpose;" and that, so far as his experience goes in midwifery, he knew of no remote ill effects having occurred either to mother or child.

The cases of natural labour in which chloroform was administered in the Dublin Lying-in Hospital are divided by Dr Denham into—

1st, The ordinary every-day case, in which the labour was short and comparatively easy, and where the patient would have soon got well, whether it was given or not.

2nd, Cases where some interference was necessary, and where the chloroform was given with marked advantage, causing the labour to advance, while at the same time it saved the patient from a very considerable amount of suffering.

3rd, Cases in which chloroform appeared to be, not only useless, but, when persevered in, positively injurious.

Dr D. details a few illustrative cases of natural labour belonging to each of the three foregoing divisions. Of the first he gives a brief outline of seven cases, and which were all "made well," while under the influence of chloroform, with a very happy effect; five of the females denying all consciousness of pain, and several of them being ignorant of the time when their children were born. They all had good recoveries, without a single bad symptom either at the time or subsequently. Of the second division of cases Dr D. found the good effects of chloroform more decidedly evident, and contrasts the doubtful effects of opiates with the more certain, more speedy, and infinitely more efficient, influence of chloroform; the former, which, to insure their effect, must be given in large doses, too generally producing complete suspension of all uterine action, perhaps for hours, while the giving of the latter can be regulated so as only to allay the irritability of fibre, and quiet any unusual suffering, without interfering for any length of time with the progress of labour. In the cases given by Dr D. under this head, the pains, although apparently diminished in frequency and force, yet produced a better effect, and hastened on the labour. Of the third class or variety of natural labours—viz., that in which chloroform appeared to be not only useless, but, when persevered in, positively injurious—several cases are also cited, which certainly prove that this agent occasionally seems to render some tedious labours more tedious still, by suspending for a time uterine action, which, however, is only for a time, "the pains, though weakened at first, coming on more vigorously and with better effect after the use of chloroform than before."

Dr D. thinks that we are taught by the fifteen cases by which he illustrates his remarks on the use of chloroform in natural labour, "that it will be found applicable to many cases, useless in some, and injurious to a few;" and says, in answer to the now common enough question put

to the busy obstetrician, "Do you use chloroform in all cases of natural labour?" "Certainly not; — because many labours are so rapid, and attended with so little pain, that either it is unnecessary, or there is not sufficient time to produce the desired effect." But wisely remarks, "that we have much to learn (apart from all professional notoriety and eclat) as to the cases in which it will be found not only admissible, but really useful; or when to give and how to give, and how much to give, in order to ensure the mitigation of our patient's sufferings, without rashly interfering with the natural progress of natural labour."

Dr D. then gives the result of his experience with chloroform in preternatural, instrumental, and complex labours, and fairly anticipates no difference of opinion as to the gratitude of the profession being justly due to the discoverer of the use of anæsthetic agents in what may be termed the more painful operations in obstetric surgery, more especially turning, of which Dr D. gives ten cases, well testifying to the good effects of chloroform in all such operations. "Such is our experience of chloroform in cases of turning, and so completely is the master of the hospital impressed with the value of it, that he administers it before turning as regularly as he should employ the perforator before extracting with the crotchet."

Crotchet Cases.—Dr D. gives twelve cases in which chloroform was found (as it will be in the great majority of such cases), "a valuable adjunct in rendering the patient more manageable, and the operation more easily performed." In none of Dr D.'s cases did any untoward symptom arise, either at the time of the operation or subsequently, that could be ascribed to the chloroform.

Forceps Cases.—Seventeen cases are noted in which chloroform was administered, and not only were the operations facilitated, but the sufferings of the patients greatly diminished by its use, while the recoveries, on the whole, were above the average in such cases. "A review of the cases," says Dr D., "will, I think, prove to the most sceptical, that chloroform is not only admissible, but highly beneficial, in forceps cases."

Convulsion Cases.—In three cases of convulsions, chloroform was given, not to prevent or put a stop to the fits, but simply for the purpose of mitigating the sufferings of the patients, or advancing their labours. As to the question of safety in giving an agent like chloroform in puerperal convulsions, Dr D. says, that in his cases it had nothing to do with the inducing of the convulsions, nor did he ever meet with a case where such a result could be attributed to chloroform, which, although it did not put a stop to the fits, certainly served, in the first instance, to control them, at least for a time. On this important point (the administration of chloroform in puerperal convulsions), Dr D.'s experience is too limited to enable him to speak decidedly; he therefore prudently neither recommends it as a preventative nor a cure, but, we think, properly remarks, that if there was no organic disease present, nor any determination to the head in the intervals, no fear need be experienced in administering chloroform where circumstances seemed to indicate its use, or when called upon to perform the operation of turning, or delivering by instruments in a case complicated with convulsions.

Dr Denham, in the course of his excellent remarks, wisely eschews subscribing to the opinions of those who advocate extreme views, either for or against the use of chloroform in labour, he having witnessed enough to induce him to disregard the timid cry of "fearful results," and at the same time practically learned the lesson, that we are not entitled to expect from the use of this "sweet oblivious antidote" more than we are from any other single agent,—"a never failing, ever blessed" result. "A middle course will be found the safest." The following are the conclusions borne out by the history and progress of the cases reported and commented upon:—

1st, That chloroform is a most valuable agent in all turning, forceps, and crotchet cases.

2dly. In some cases of natural or difficult labour, it is useful in relieving pain, and in relieving the soft parts, and thereby advancing the labour.

3dly. If given in large quantities, or if persevered in too long, it puts a stop to all muscular action. This is contrary to the opinion of Dubois, who states, that it never destroys the uterine contractions, or those of the abdominal muscles.

4thly. In such cases the pains generally return with increased force when the chloroform is discontinued.

5thly. It does not relax the perineum more than the other soft parts. Dubois states that it does.

6thly. When organic disease does not contra-indicate its use, there is little danger to be apprehended from it in midwifery practice.

7thly. Chloroform may be administered

to such a degree as not to take away reason and consciousness, and yet to secure the patient immunity from pain.—*Dublin Quarterly Journal of Medical Science*, August 1849.

Chloroform theoretically and practically considered.—"In order to secure to the patient *complete immunity from pain*, chloroform must be administered to such a degree as to take away reason and consciousness, and, when so administered, it is liable to induce apoplectic stertor, convulsions, partial paralysis, impairment of uterine contractile energy, and other still more formidable consequences."— Dr Montgomery's (non-illustrated) "Objections," *Dublin Quarterly Journal of Medical Science*, May 1849.

"I must say that I have never met with a single untoward circumstance affecting the health or life of either mother or child, that would in the slightest degree deter me from giving chloroform when I thought it desirable or necessary. I have never witnessed any of the dreadful evils described by some writers as consequent upon its use. I have never seen the blood blackened, or the brain poisoned; nor has it ever in my hands, induced convulsions, partial paralysis, or other still more formidable consequences."— Dr Denham's (illustrated) "Report," *Dublin Quarterly Journal of Medical Science*, August 1849.

Ergot of Rye with Chloroform.—In the Report of Dr Denham on the use of chloroform, the combining ergot with chloroform is spoken of as safe and judicious when circumstances call for it; the instances quoted in which the conjoint use of these were tried, prove their great value in occasionally producing the best results in cases where the pains are painfully inefficient. Professor Beatty confirms the value of the combination in a report of cases read before the Dublin Obstetric Society; and we can point to several instances where the practice was adopted with much apparent effect.

Apparatus for the purpose of administering Chloroform.—Dr Fleming, at the conclusion of Dr Denham's report, exhibited and described to the Dublin Obstetric Society, a chloroform apparatus, which he had used for some months past. This consists of a small capsule of glass, with an overlapping edge. The capsule is circular, and about two and a-half inches in diameter. Within it is placed a small slice of sponge, which, when the apparatus is about to be made use of, is saturated with chloroform; and this he styles the "Chloroform Sponge." Round the neck of the glass a large cup-like sponge, hollowed out, and so shaped as to cover the nose and mouth, is attached. Through the pores of this sponge the atmospheric air is admitted. Before use both sponges are damped with water, and then the proper measure of chloroform is poured upon the small flat sponge contained within the capsule.—*Dublin Journal*, August 1849.

[We have for some time past avoided expressing any strong opinion on the *quæstio vexata* of the use of anæsthetics in midwifery, believing that the records of experience on this subject would alone be listened to in the end by the profession, and would both fix insensibly the limits to which chloroform, or any similar agent, ought to be used, and overcome the prejudices of those who objected, on *a priori* grounds, to its employment. Nor have we been disappointed in this expectation. We believe we may say, that the history of anæsthetic midwifery, for the last twelve months, has been one of uninterrupted, though not unresisted progress, and that there is no instance on record of any one who had used this agent at all extensively in midwifery, renouncing its employment through experience of any of those fears or actual casualties, which have restrained the hands of so many well-meaning opponents, and furnished material also for the calumnies of interested and unscrupulous detractors. On the other hand, we have had the most decided testimonies, from men of the highest character, and of the largest experience in its use, whether in America, on the Continent, or in this country, to the effect that its benefits are incalculable, and its dangers, when in proper hands, insignificant. Dr Channing of Boston, who has published the result of 581 cases of etherization in child-birth (including many where chloroform was used), declares as follows:—"It is no part of the purpose of the following lecture, to teach, or to leave it to be inferred, that untoward results have not followed, or will not again follow, etherization. But I can, and do say, that I have not met with an untoward result in any case of midwifery in which etherization has been induced, which, by any violence or ingenuity of explication, can be ascribed to this state as its cause. I have met with no record of such."—(*Treatise on Etherization in Child-birth*, Boston, 1848, p. 28.) And we have now, from Dr Denham, a testimony of the most unequivocal kind in favour of anæsthetic midwifery, drawn from a large hospital experience, and detailed with the utmost impartiality, in a city where, according to Dr Montgomery's statement a few months before, "this mode of manag-

ing natural labour has, as yet, found but little favour; and, among the better educated class of women, the great majority are, in general, decidedly averse to it."

The most important, both from character and position, of the late opponents to the use of chloroform, or other anæsthetics, in natural labour, is unquestionably Dr Montgomery, the Professor of Midwifery to the King and Queen's College of Physicians in Ireland. In the May number of the *Dublin Journal of Medical Science*, Dr Montgomery publishes his opinions on chloroform, as an obstetrical agent, under the title of "*Objections to the indiscriminate Administration of Anæsthetic Agents in Midwifery.*" Unlike Dr Denham, however, Dr Montgomery *reports no cases in illustration* of the cogency of his objections. These objections are entirely of the physiological, religious, personal, or other *a priori* kind, and have been so completely exhausted by previous writers, and so often answered by Dr Simpson and others, that we are most unwilling to recur to subjects in which our voice could do no good, seeing that we believe those who are still unsettled or unconvinced, can only be taught by the resistless teachings of accumulated facts, and the gradual, but sure, revolution of public opinion. We have carefully looked over Dr Montgomery's "Objections," with the view of selecting, for our practical readers, the required illustrative proof, but finding nothing tangible, in the shape of cases or facts, we are constrained to view them in their real light, that of *mere matter of opinion*. We should, however, be dealing unfairly with the learned Professor, did we here withhold his acknowledgment of the "value and utility of chloroform in obstetric operations, such as instrumental delivery, turning a child in utero, or the removal of a retained placenta, and also in some peculiar circumstances of natural labour, independent of any operation,"—a *saving clause* which gives a practical value to our author's "Objections" which they do not otherwise by any means possess, and which, while it may tend in some degree to mitigate the Doctor's strictures upon those whom he believes to have acted with a "zeal not according to knowledge," contrasts strangely with the earnestness with which he warns "the young and inexperienced against being dazzled by a delusion or seduced by an *ignis fatuus*." Professor Montgomery, who so "sincerely rejoices that we (in Dublin) do not too readily run, with school-boy impetuosity, after every butterfly-theory which, with gaudy wings, is seen fluttering through its hour of evanescent life in our social atmosphere," ought, we think, himself to remember, that the "wisdom" which, in a matter like this, most readily "illumines with its brightness the darkness of surrounding nations," is that of experience; and that, therefore, if he desires to enlighten his obstetrical brethren on such subjects as the administration of chloroform in labour, he must favour them with a recital of the nature, progress, and result of the cases in which he has used it, for it is by *practical* testimony alone that he need ever expect to "convince the understanding," if not stay the hand, of those who may be "so bold or rash, so enthusiastic, or so heedless of consequences, as to keep every woman confided to their care in a state of stupefaction and unconsciousness, with her blood blackened and her brain poisoned, from the beginning to the end of labour."

Mr G. T. Gream stands almost alone among the objectors to anæsthetics, in professing to bring forward *facts* in support of his views. In a late pamphlet on the "Misapplication of anæsthesia in childbirth, *exemplified by facts*," he has thought fit to revive a number of old objections, and advance some new ones, backed by a large amount of *anonymous* and *strictly private* testimony, which, we must freely confess, is of a nature to inspire not a little astonishment among those who know the use of chloroform in midwifery, either from personal experience, or from the testimonies of its friends, or *open* enemies. We have no taste for the severe criticism, which this pamphlet merits, and we only allude to it to assure Mr Gream, that we shall not think it necessary to consider his charges until they are brought forward in the form of *entire documents*, instead of extracts filtered through a hostile medium; and until we see them authenticated in such a manner as to render them admissible in evidence on this subject. The advocates of chloroform have never concealed the sources of their evidence; the chances of "obloquy," and of such evil-speaking as Mr Gream and others delight to indulge in, have not frightened them from the course which a sense of propriety and professional honour dictate; and we shall not demand less of those who bring forward evidence on the other side, or who set themselves up as self-constituted judges of the character and conduct of others, it being their "nature's *plague*," as Mr Gream himself confesses, "to spy into (*fancied*) abuses."

Dr Channing, like Mr Gream, sent circulars with the view of procuring information in reference to this subject. "The object of the circular," says he, "was to learn what had been *the whole result* of etherization so far as it has been employed in midwifery among ourselves."—(*Op. Cit.*, p. 4.) *Unlike* Mr Gream, however, Dr C. has published both sides of the information received, and given the world the means of judging of its value by affixing to it the names of its contributors, who can, in this manner, recognise their own testimony, and feel assured of its being rightly dealt with. Let Mr Gream go and do likewise. Till then, we have nothing further to say to him. We marvel only that certain portions of the medical press should have abetted him in his ill-advised and most preposterous conduct. To encourage these anonymous detractions, and to use them in opposition to the accredited documentary evidence produced by Drs Simpson and Channing, appears to us not less opposed to every canon of true or just criticism, than would be the attempt to subvert the truths of history by the vague and unsatisfactory data of oral tradition. We protest against such proceedings, and we call upon all who, by their position, can aid in the preservation of an unblemished medical literature, to repeat the protest.]

V.—MATERIA MEDICA AND THERAPEUTICS.

295.—*On the Purgative Properties of the Oils obtained from Plants indigenous in the Antilles.* By W. Hamilton, M.B.—"The *Argemone Mexicana*, yellow thistle, or prickly poppy, an herbaceous plant, belonging to the *Papaveraceæ*, is an annual common in Nevis, St Kitts, and most of the West Indian islands, where it grows upon rubbish and by roadsides, yielding its large golden blossoms, and capsules filled with multitudinous globular scrobiculated seeds, at almost every period of the year. These seeds, gathered at the proper period of maturity, yield to pressure a bland purgative oil, possessing anodyne and narcotic qualities, which render it a most desirable addition to our anti-choleraic remedies, and one to which I have repeatedly, but hitherto I regret to say fruitlessly, endeavoured to direct the attention of the medical world. The oil is occasionally to be met with among the negroes, who ask a quarter of a dollar, or about fourteen pence sterling, for a small phial of it, hardly containing more than from one to two ounces, and most frequently adulterated with the oil obtained by boiling or expression from the seeds of the *Jatropha curcas*, or common physic nut, which communicates to it drastic and emetic qualities that deteriorate its character and impair its utility. When in a state of purity, however, the materia medica hardly presents a more valuable purgative, or one which answers so many apparently conflicting indications at one and the same time. In that excruciating complaint, so common in all climates, colic, arising from constipation of the bowels, thirty drops of this oil, taken upon a lump of sugar, allay the pain as if by magic, throw the patient into a profound and refreshing sleep, and after a little time produce a copious and painless evacuation of the bowels. The minuteness of the requisite dose, the instantaneousness of the relief it affords, and the mild and gentle though effectual action it produces in the intestinal canal, seem peculiarly to adapt it for cases of cholera, superseding the use of chloroform and opium for subduing the cramps, and mitigating the more urgent symptoms. The oil, I conceive, may be most easily and copiously obtained from the recently gathered seeds in the places which produce the plant, and not from those which are over-ripe, or which have become dry by long keeping. Cultivation, and the appliances of horticultural skill, would no doubt improve the quality and increase the quantity of the produce, while adulteration should be guarded against with the utmost vigilance."

[Dr Bowerbank, of Jamaica, informs us that he has for many years employed an emulsion of the seeds of the *Argemone Mexicana*, made of one drachm of the seeds, eight ounces of water, and a sufficiency of sugar. In the dose of a wineglassful every second hour, this preparation does not purge, but acts efficiently as an anti-spasmodic in asthma. It promotes expectoration, and sometimes excites vomiting. Dr B. has also made some experiments with the inspissated juice of this plant, and has found it inert—a result opposed to that which a consideration of the botanical affinities of the *Argemone* had led us to anticipate.]

"The *Jatropha curcas*, or common physic-nut, is a plant of the natural order *Euphorbiaceæ*, common in all the hedges in Nevis and St Kitts, where it attains a height of from six to seven feet, and may be found in flower and fruit throughout the year.

The seeds, which are nearly of the same size with those of the *Ricinus communis*, yield on pressure an oil, which, in the crude state in which it is usually obtained, is powerfully drastic and emetic. But, from what some writers state, it would appear that the acrid property of the oil arises from some deleterious principle resident in the cotyledon leaves, which divide the kernel into two equal parts; and the removal of which, previous to the operation of pressing, would divest the oil of its objectionable qualities, and render it as bland and efficacious in its operation as that obtained from the seeds of the *Argemone*. And I am the more inclined to this opinion from the resemblance, in many of its medicinal properties, which exists between the milky juice of both plants; and from the powerfully anti-spasmodic effects of a decoction of the leaves, which the celebrated Dr Wright (of Jamaica) assures us "is often used with advantage in spasmodic bellyache (colic) attended with vomiting, sitting easier on the stomach than anything else, and seldom failing to produce a discharge by stool." The usual dose of the oil is a table-spoonful, or about half an ounce. From the abundance of the physic nut, the facility with which it is propagated, and the abundance of oil which it affords, the *Jatropha curcas* is eminently entitled to the attention of those philanthropists who would raise our West Indian colonies from their present state of suicidal prostration, by the cultivation of their natural capabilities, rather than by the horrors of immigration, the resuscitation of monopoly, or the oppression of the Creole peasantry."

[From numerous experiments with the oil of the *Jatropha curcas*, Dr Christison found that one sample expressed from Barbadoes seeds acted precisely like castor oil, in the dose of ten, fifteen, and twenty drops; but that another from Jamaica seeds sometimes caused the same severe sickness and watery evacuations as croton oil, and at other times was inert in the dose of thirty drops.—*Dispensatory*, 2nd edit., p. 794. Dr Bowerbank's experience of the use of this oil accords with Dr Christison's observations; and we are informed by Dr B. that the same irregularity characterises the purgative action of the oil of the seeds of the *Hura crepitans*.]

"The *Hura crepitans*, or sand-box tree, is a small tree, remarkable for the extreme brittleness of its timber and the slowness of its growth. It belongs to the natural order *Euphorbiaceæ* of De Candolle, and attains a height of about thirty feet, with spreading branches, which afford an agreeable shelter from the fervid heat of the sun, to a distance of sixty feet frequently in diameter; but even the largest of these branches are so singularly brittle as to snap with a sudden gust of wind, or even a loud peal of thunder. It thrives best in a deep rich soil, and in the vicinity of water, and is cultivated, for the sake of its shade, near the house of the planters.

"The seeds, which are contained in the cells of an extremely compressed circular capsule, marked externally by deep furrows, corresponding to the number of the cells and seeds within, possess, when recent, a strongly emetico-cathartic quality, insomuch that the new comer, who, tempted by the agreeable flavour of the kernel, imprudently eats even so much as a single seed, is usually attacked with a severe vomiting and purging within a very few minutes after. This effect may be counteracted, as far as the emetic operation is concerned, as an American captain, whom I met in the West Indies, informed me, by splitting the kernels in two, and carefully removing the cotyledon leaves, in which the emetic principle appears wholly to reside. Thus prepared, he constantly carried them about him, and found four or five eaten in the morning relieve his bowels without sickness, pain, or griping. The oil obtained from the recent seeds, similarly prepared, would most probably be found a valuable addition to the purgatives of our materia medica. With age, the seeds become almost totally inert. I have myself eaten several with the most perfect impunity; but I should not advise others to act with equal imprudence."—*Phar. Journ.*, Sept. 1849.

296.—*On Collodium Cantharidale.* By F. Ilisch.—According to Dr Ilisch of St Petersburg, collodion in combination with cantharidin, is in many cases well adapted to act as a vesicant, supplying not only the place of the *emplastrum cantharidis*, but affording even the advantage of dispensing with linen and leather. It is particularly useful in cases where a strong vesicant is to be applied to a part of the body where it can be easily disturbed by the movements of the patient, or where the irritability of the latter prevents the undisturbed position of the plaster.

For its application, nothing is required but to paint the part with it by means of a brush. If, after the collodium has been thus applied and dried, which occurs within about half a minute, some part of the skin is found not to be perfectly covered by it, the application is to be re-

peated; and the effect is quicker and safer if the part be covered with lard. The collodion operates as speedily as blister plaster, and possesses the advantage of not staining the linen.

Preparation.—One pound of coarsely powdered cantharides is subjected to the action of one pound of sulphuric ether and three ounces of acetic ether, in Mohr's apparatus; and the liquid is allowed to percolate the cantharides as long as it is coloured, by which a saturated ethereal solution of cantharides, together with some coloured animal fat, is obtained. In two ounces of this liquid, twenty-five grains of gun-cotton are dissolved. This is the easiest method, and can be performed with facility in the laboratory of any apothecary. The process is more complicated and expensive if twenty grains of pure cantharidin and twenty-five grains of gun-cotton be dissolved in one ounce and a-half of sulphuric ether and half an ounce of acetic ether.

The *collodium cantharidale* can be preserved without injury in well-closed glasses, and is, for that reason, better adapted than any other vesicant for military hospitals, and for diseases which befal the soldier on his march.

Although the *collodium cantharidale* is much more expensive than the blistering plaster, there is a great saving in its use; for one drachm and a half of it are equal to half an ounce of the latter. Its efficacy has been substantiated by several experiments made by Balbiani and Boose.—*Pharm. Central Blatt.*, and *Pharm. Jour.*, September 1849.

[Two specimens of the *collodium cantharidale* have been prepared for us by Messrs Duncan and Flockhart of this city, in one of which acetic ether was the solvent medium employed; in the other, sulphuric ether. From some trials of our own, and others made by Dr J. W. Begbie, in the Royal Infirmary, it has been found that these preparations act efficiently as vesicants when applied in a layer of considerable thickness. The preparation made with acetic ether is the more certain vesicant, but it is inferior to the other in not forming a dry membrane. It is not, as stated above, an economical preparation.]

297.—*On Rhine Wines.*—"The following results of experiments, performed by Geisser with the most scrupulous attention, are communicated by Liebig (*Ann. d. Chem. und. Pharm.*, lxv. 356), and accompanied by some very important observations.

"The various sorts of Rhine wine were all of the growth of the year 1822, and are here enumerated according to their value in a descending scale.

Place of Growth.	Sort of Grapes.	Specific Gravity.	100 Parts yielded	
			Absolute Alcohol.	Dry Residue.
Steinberg	Riesling	1·0025	10·97	9·94
Rudesheim	Orleans	1·0025	12·65	5·39
Markobrunn	Riesling	0·9985	11·60	5·10
Geisenheim	...	0·9935	12·60	3·05
Dirnheim	...	0·9928	9·94	2·18
Weinheim, Hubberg	...	0·9925	11·70	2·18
Worms, Liebfrauenmilch	...	0 9930	10·63	2·27
Elsler, Kleinberger	...	...	11·90	...
Wiesbaden	...	0·9950	10 83	2·78
Neroberg	...	0·9945	5·83	2·48
Winsloch	...			

"From the known prices of these wines, it is obvious that the proportion of alcohol, although one factor, in determining the value of a wine, is not the only absolute one, nor does it stand in any fixed relation to the commercial value of the wine. It is remarkable that the finest sorts of wine contain a much greater proportion of solid substances in solution than the inferior sorts; and that the weight of the residue which the Rhenish wines yield on evaporation, offers a safer criterion for determining their commercial value than the proportion of alcohol. [The same is also the case with wines from the Palatinate: Herxheimer Riesling of 1844 is sold at 24 kr. the bottle; and Deidesheimer and Forster-Riesling, of the same year, at 33 to 36 kr. per bottle; after evaporation, there was found in the first only 8·7 parts of solid substances in 100 parts. This so-called extract of wine is yellowish brown; at 212° Fah. it is still viscid, very hygroscopic in the air, and of a very acid taste; besides supertartrate of potash, it contains a free vegetable acid, which is analogous to citric acid. Small proportions of sulphuric and phosphoric acids are neutralised by potash, lime, magnesia, ammonia, and a small quantity of protoxide of iron. If the free acid of this wine be saturated by potash, the liquid evaporated, and a mixture of sulphuric acid and alcohol dropped on the residue, which is then heated, a peculiar agreeable smell develops itself, almost like that of

Malaga wine, but no smell of acetic ether. —*Buchner.*] These solids disguise the acids, take off the acrid taste, and at the same time impart body, mellowness, and oilyness. Among the extractive matters of new wines are sugar, which gradually disappears by keeping; and also some imperfectly known gummy substances, which become brownish when the wine is submitted to evaporation. The presence of these in wine appears chiefly to be determined by the soil, and the condition and locality of the vineyard; and it is obvious that the qualities dependent upon these extractive matters cannot be replaced by sugar.

"It is of importance that the free acid be not removed before the fermentation, because on its presence during this process, as well as during the stoving, depend the taste and principal qualities of the wine. If the acid of the wine must be neutralised prior to fermentation, this process is not prevented, but a fermented liquid is obtained which has no longer any resemblance to wine, and which, even by keeping, never recovers the odour and taste it ought to possess.

"In France an artificial, and therefore fugitive, bouquet is produced, especially in Bordeaux wines, by allowing the fermentation of the unpressed grapes to proceed at a rather high temperature, and under but very slightly limited access of air. In most Bordeaux wines this bouquet is acetic ether; but it is not unlikely that, under these circumstances, butyric ether is also produced. The want of free acid, as may easily be seen, is here supplied by means which promote the generation of acid."—*Phar. Journ.*, Sept. 1849.

Dr Christison observes, that in addition to the bitartrate of potash, "The other solid contents of wine are small in amount, except in sweet wines. The sugar of sweet wines is generally abundant, makes them soon pall on the taste, and renders them little available in medical practice. The resino-mucilaginous extract, colouring matter, and tannin—the last two of which are derived from the husk of the grape, and occur principally in red wines—are never abundant, and diminish slowly with age. The total solid contents are scanty in every wine, except the sweet kinds. In port and sherry, when fit for drinking, the solids seldom exceed 3 per cent.; in Bordeaux wine they amount to 2½; and in Hock and Moselle to 2 per cent. only."—*Dispensatory*, 2nd edit., p. 943.

298.—*How to distinguish between True and Spurious Valerianates.*—Within the last few years compounds of valerianic acid with oxide of iron, with oxide of zinc, and with quina, have been introduced into medical practice as efficacious remedies, especially in hysteria, and other affections of the nervous and uterine system, and in fevers. A good deal of attention has been devoted by practical chemists to the preparation of these valerianates, and several processes for making them have been published. The valerianates, however, have always, and necessarily, been expensive preparations, yet the use of them has been gradually extended in consequence of the testimony borne to their great efficacy. Increased demand led to competition in the supply, which has recently resulted in the adoption, by some manufacturers, of a system of fraudulent substitutions that would have speedily brought a valuable set of remedies into disrepute, had not the fraudulent practice been detected.

Citrate and tartrate of iron, flavoured with a few drops of oil of valerian, has been extensively supplied for valerianate of iron; and acetate of zinc, flavoured in the same way, has been substituted for valerianate of zinc; and these spurious compounds have been sold at prices which, although defying competition on the part of the genuine valerianates, have, nevertheless, been twenty or thirty times greater than the commercial value of the substituted articles. For valerianate of quina the disulphate of that base, with a little oil of valerian to disguise it, has been in like manner substituted.

Thus compounds have been supplied for the three medicinal valerianates, which have not contained a particle of the most important of the constituent which should have been present, namely, the valerianic acid.

Such being the nature of the frauds which have been practised, we have no doubt upon many of our readers, we proceed to point out the means of detecting them.

1. *The true valerianates* have a sour, disagreeable, and very persistent, although not powerful smell, which is essentially different from that of oil of valerian.

1. *The spurious imitations*, being flavoured with oil of valerian, smell strongly of that substance.

2. *The true valerianate of iron* is almost entirely insoluble in water; and the valerianate of quina fuses into oily globules in boiling water, and dissolves with difficulty. They are both freely soluble in spirit.

2. *The spurious valerianate of iron* is perfectly soluble in water, especially when

aided with a little heat; it is insoluble in spirit. *The spurious valerianate of quina* is soluble in about thirty parts of boiling water, and, as the solution cools, it is deposited in acicular crystals, which have the bitter taste and other characters of disulphate of quina.

3. *The true valerianates*, when mixed with a little diluted hydrochloric acid, are decomposed, and the valerianic acid being set free, rises like oil to the surface of the liquid. To get this character, it is necessary to operate upon from five to ten grains of the specimen, and to avoid the use of too much of the diluted acid, as valerianic acid is soluble in about thirty parts of water. The liberated valerianic acid has the sour, disagreeable, and very persistent smell, which, to a slight extent, is perceived in its salts, but it is readily distinguished from that of oil of valerian.

3. *The spurious valerianates*, when added to water, will generally yield a thin film of oil, which floats on the surface, and is easily detected as oil of valerian. On heating the liquid this oil is driven off, without otherwise decomposing the salt, and no further indication of valerian will afterwards be obtained. On treating them with diluted hydrochloric acid, there is no valerianic acid set free.

4. *The true valerianates*, when mixed with a little proof spirit, and one-fourth the volume of oil of vitriol is then carefully added, will yield valerianic ether, which is recognised by its agreeable fruity smell, somewhat resembling that of the pine-apple. This ether can hardly be distinguished in smell from butyric ether.

4. *The spurious valerianates* yield no valerianic ether; but the *spurious valerianate of zinc*, when treated as above, yields acetic ether, which is easily detected.

The foregoing tests are sufficient to distinguish the true valerianates from the spurious substitutes above-mentioned, but there is reason to believe that other substitutions have been practised, although not so extensively. We have met with a specimen of so-called valerianate of iron, which is evidently not what its name indicates, and yet it contains neither citrate, tartrate, nor acetate. It is in the form of a brown powder, insoluble in water and in spirit. It smells of valerianic acid, but on being decomposed with hydrochloric or sulphuric acid, yields no appreciable quantity of the oily product. We have not had time to submit this specimen to a careful examination, but it is easily distinguished from the true valerianate of iron by its being insoluble in spirit, while the latter dissolves freely in this menstrumum, even without the application of heat. This suspected specimen is also distinguished from the genuine by its behaviour when heated in a platinum crucible.

The true valerianate, if carefully heated, fuses, gives off valerianic acid undecomposed, then as the heat is increased, burns with a luminous flame, and emits a very offensive odour.

The suspected specimen does not fuse or give off any appreciable quantity of valerianic acid. The vapour does not readily inflame, and the odour emitted is not offensive.

The residue of oxide of iron is the same in both specimens, namely, twenty-five per cent., and the acid originally present is organic.

Where mere adulteration is practised, the detection of the fraud is much more difficult than it is in the cases to which we have hitherto alluded, the cupidity of the manufacturer having fortunately, in these cases, blinded his discretion, so that a speedy exposure of the practice was inevitable.

About three years ago, as we find from the "Journal de Pharmacie," much of the valerianate of zinc met with in Paris was found to have been made with butyric acid, instead of valerianic acid. The butyrate thus substituted was of a more beautiful and crystalline appearance than the true valerianate, but it did not essentially differ in character, and the detection of the fraud, by satisfactory tests, was not easily accomplished. A paper was published on the subject by Messrs Laroque and Huraut, in which they recommend the use of a concentrated solution of acetate of copper for distinguishing valerianic from butyric acid. In the use of this test, however, it is necessary, in the first place, to eliminate the acid by adding sulphuric acid to the salt and separating the volatile acid by distillation. When butyric acid is added to the concentrated solution of acetate of copper, a bluish white precipitate is immediately formed; but on adding valerianic acid in like manner, there is no immediate appearance of precipitation or turbidity of the liquid, but on shaking it, oily drops, of a greenish colour, separate, partly rising to the surface and adhering to the sides of the vessel, and partly falling to the bottom. These oily globules consist of anhydrous valerianate of copper, which retains this condition sometimes twenty minutes or more, but it ultimately becomes hydrated, and then forms a bluish green crystalline powder.—*Ph. J.*, June 1849.

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

NOVEMBER, 1849.

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I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

299.—*Transplantation of Testicles.*—In Müller's Archives is a most interesting paper with this title, by Professor Berthold, of Gottingen:—

A series of comparative experiments were made by him: he castrated six young cocks, of two and three months old, leaving the wattles, combs, and spurs untouched.

From two of them (*a* and *d*) he removed both testicles. Thenceforth they took on the nature of capons, fighting very seldom and feebly, and giving the well-known monotonous capon crow. Their combs and wattles were pale, and little developed, and the head remained small. About five months after, they were killed; a small scar occupied the place of each testicle, and the seminal duct had degenerated to a mere thread.

From two others (*b* and *e*), only one testicle was removed, the other left in the belly. In two others (*c* and *f*), both testicles were excised, but one belonging to *c* was transplanted into the belly of *f*, and, *vice versa*, one of its testicles transplanted into *c*; thrust amongst the bowels, and left there.

All four retained the characters of uncastrated fowls; they crowed lustily; frequently fought with each other, and with other young cocks, and exhibited the ordinary inclination for the hens. Their combs and wattles developed like those of others.

The cock *b* was killed two months after;

its single testicle was in the ordinary place, but had hypertrophied, and, on section, a white fluid exuded, which contained cells, but no spermatozoa.

On the same day, the remaining three had their well-developed comb and wattles excised. The cock *e*, at the same time, was deprived of the remaining testicle; and *c* and *f* examined in the ordinary situation in vain for their transplanted organ.

The now fully castrated *e* never grew comb or wattles, it ceased to concern itself about the hens, and fought no more with its own sex. *C* and *f*, however, reproduced both comb and wattles, and preserved their ordinary chivalrous demeanour. They were killed six months after the transplantation. In *c* the testicle was found behind the colon and between the ends of the cœca. In *f* it was nearer their middle, but otherwise in the same situation. They were of large size, and received large branches of the mesenteric vessels, which passed towards them, entered, and then took the ordinary course, in relation to their seminal tubes. On incising them, a normal seminal fluid exuded with the ordinary cells and spermatozoa.

The author concludes:—

1. That the testicles are transplantable, and reunite with living tissues after their separation from the body, not only at their ordinary site, but in an abnormal situation.

2. Like the grafted tree, the organ on this new place still preserves its specific properties, and secretes its specific fluid.

3. It is well known that after a division a re-union of nerves restores sensation and movement. And it follows, from these experiments, that as the re-union could not have been one of those originally divided, there are no specific seminal nerves; that nerves only are requisite—a strong, nay, almost a fatal objection to the theory, that would constitute the sympathetic a trophic nerve, or nerve in itself specifically organised with reference to nutrition.—*Med. Times*, July 21, 1849.

300.—*On Luminosity of the Human Body.* By Dr Schneider.—Dr Schneider is acquainted with a strong, healthy, dark-haired Capuchin monk, who, on removing his head-dress, always induces a number of shining, crackling sparks from the hairy scalp. Fearing that the large quantity of the good beer he was in the habit of taking had something to do with this, he diminished his potations, and the appearance also diminished somewhat, though it did not cease entirely, continuing still perceptible during an illness which prevented his taking beer for three weeks. In another case, luminous sparks were given out whenever the patient passed his urine. Nasse has collected various examples of this preternatural illumination. Marsh relates two cases, in which the heads of phthisical patients were surrounded by phosphoric light. Kaster relates one, in which light was seen in the perspiration and body-linen after violent exertion. Jurine, Guyton, and Driessen observed luminous urine after prior exertion in healthy persons; and Nasse met with it in a phthisical patient. Percy and Stokes saw a bright light emitted from a cancerous ulcer; and the breath of spirit-drinkers, it is well-known, emits it.

In the opinion of Nasse, this appearance chiefly depends upon impeded respiration, and a diminished quantity of oxygen gaining access to the lungs. This is the case with the phthisical, as also with the healthy, when a plethoric state of the lungs is induced by great exertion. Spirit-drinkers, owing to the changes wrought in the blood by alcohol, are in an analogous position to the phthisical; and it is in such subjects that spontaneous combustion generally occurs. The congestion of parts with dark blood, as in the case of ulcers, may give rise to it; as also the sweat of an over-heated skin, the urine of persons suffering from syphilis, or other cause of diminished strength. Animals that normally give rise to the phenomenon of illumination are all low down in the scale, and possess but imperfect respiratory apparatus. Much light-producing material enters into the composition of the body; and although, in the normal conditions, phosphorus, sulphur, and carbon are expelled from the frame, combined with acids, by the kidneys, yet, as in diseased states, we may find carbon in the bronchial glands, and sulphur in the abdominal flatus, so may we suppose phosphorus may sometimes remain uncombined with oxygen. Such escape of unburnt phosphorus would be favoured by whatever limits the respiratory powers and diminishes the quantity of free oxygen in the blood. In experiments upon dogs, it has been found that phosphorus, mixed with oil and injected into the blood, if time be not given it to combine with the oxygen of the body, escapes unburned from the lungs.—*Casper's Wochenschrift*, No. 15, and *Med. Chir. Rev.*, October 1849.

301.—*The Recurrent Laryngeal Nerve.*—Some cases illustrate more strikingly than others the explanation which anatomy affords of many anomalous symptoms. The following case, related by Dr C. H. Kingdon, of Exeter, in the *Pro-*

vincial Journal for September 5, is interesting, although by no means unprecedented.

A man, aged thirty-six, had, among some obscure symptoms, difficulty in swallowing, with the feeling of something in his throat, some difficulty in breathing, with occasional cough, and the voice had become unnatural, being feeble, yet with great distinctness of intonation. There was also oppression about the chest. Soon after these symptoms were noted, he was suddenly seized with a sense of suffocation, as if strangulated. Tracheotomy was thought of, but not performed. An unusual pulsation or movement was noticed in the right supra-clavicular region. The attacks of spasm abated and recurred alternately for thirty-six hours, when the patient died.

On examination, the œsophagus, pharynx, larynx, and trachea were found perfectly healthy. The primary bronchi were red and dry. An aneurism of the aorta was now discovered. It opened between the origin of the innominata and left subclavian branches, and was of the size of a hen's egg. Careful dissection discovered the recurrent or motor laryngeal nerve passing immediately under the body of the tumour, and thus solved the "difficulty" of the case.

302.—*Chloride of Zinc as a Preservative of Animal Matter.*—Official reports (of which extracts appeared in the *Medical Times* for June 23) have lately been published regarding the efficacy of Sir W. Burnett's solution of the above salt in preventing and arresting putrefaction, and destroying noxious effluvia. It has now been extensively used in the navy; and is found efficient in preserving timber, canvass, and cordage, and in destroying effluvia, so as to have a strikingly salutary effect on the health of the crew, as appeared from a fair comparative experiment.

It has also been employed for anatomical purposes; and there are testimonials from Dr Sharpey and Mr Bowman, certifying as to its efficacy and usefulness when employed for injecting subjects, with a view to their longer preservation, and also in preserving permanently the different animal textures. It is absolutely necessary to use some preservative fluid during the summer months, if it is wished to dissect satisfactorily; and after having used a solution of chloride of zinc for the last three years, we can confirm the above testimony. It preserves the body much longer, and also checks decomposition which has already begun, and destroys effluvium. It does not destroy colour more than spirit does, nor does it take the edge off the knives, as all the otherwise good preservative solutions do. We have used it much for preserving dissections of the nerves and other wet preparations, which require to be frequently handled; and some of these, after lying in it for the above-mentioned time, are now in perfect preservation. Although, on the whole, we prefer, for the latter purpose, common spirit, the zinc solution is less expensive, and does not require renewal. It is especially useful for correcting a preparation which is not too recent, before placing it in spirits.

Mr Bowman dilutes Sir W. Burnett's solution with fifty parts of water.

II.—PRACTICE OF MEDICINE.

303.—*Queries in Medical Ethics.* By W. Fraser, Esq., M.R.C.S.E.—[The following queries and answers, which bear reference to certain points of a practical nature, were read before the Medico-Chirurgical Society of Aberdeen, in April last, by W. Fraser, Esq., Surgeon; the answers seemed to express the views in general entertained by members, on the points to which they refer.]

Query 1.—If a patient wishes you to call into consultation a medical man of whose qualifications in the circumstances of the case you may have an unfavourable opinion, is it proper or honourable to decline doing so, or to endeavour to alter the opinion of your patient?

Ans.—If your patient expresses a very decided wish to have a particular person called in, you ought to acquiesce, provided there be no professional stain on his character sufficient to warrant you to decline doing so. His being junior to yourself, either in age or professional capacity, is certainly no sufficient reason.

Query 2.—If, on being sent for by a patient, you find that he has been under the charge of another, who, from some reason or another, has discontinued his attendance, although it was still desired by the patient, is it proper in you to take charge of the case, or ought you previously to communicate with the other medical attendant?

Ans.—You should advise the patient to

let his former attendant understand that he wishes his services continued, and if the latter decline to continue them, there is nothing to prevent you from taking charge of the case.

Query 4.—When a medical man is called into consultation by another, and supposing they entertain a difference of opinion as to the nature of the case,—a difference, however, which does not prevent them from co-operating in its future management,—is either of them justified in giving an unfavourable impression of the practice of the other to the patient or his friends, or to any other person?

Ans.—No.

Query 5.—When a medical man's advice is asked by a person whom he knows or suspects to be at the time attended by another, what is the proper course for him to pursue?

Ans.—He should do as he would be done by, and not encourage any such application; but rather by his answer endeavour to strengthen the person's confidence in his medical attendant.

Query 6.—When a medical man has a near relative residing at a distance dangerously ill, and when friends have written to him describing the condition of the patient and treatment pursued, and wishing his opinion and advice, what course should he adopt? should he address himself to the friends or to the practitioner in attendance?

Ans.—To the latter unquestionably.

Query 7.—If, during your attendance on a case, another medical man should, without your own or the patient's consent being asked, be called in, and that not by the party who employed you in the first instance, what is the proper conduct to pursue?

Ans.—I think to decline meeting with him till the wish of your patient and employer be ascertained.

Query 8.—When a medical man called, during the progress of a case, into consultation with another practitioner, persists, without any expressed wish on the part of the patient or friends, in continuing his services after the danger is over, and when the person first in attendance thinks his further assistance both unnecessary and inconvenient—what is the proper resource for the latter?

Ans.—The most effectual hint would be paying him his fee; but if he declare the case to be still in need of his attendance, you can have no resource without coming to a rupture with him.

Query 9.—When a medical man is called to a case on an emergency, during the absence of the practitioner in attendance—what is the proper etiquette to be observed by the two?

Ans.—The person called in should do what is *necessary* in the urgency of the case, and nothing more: nor should he repeat his visit. He might write a note to the regular attendant, if he thinks it necessary, explaining what has been done. The ordinary attendant, on the other hand, should not neglect to thank the other, either verbally or by letter, for his assistance; and, moreover, if this has been of great consequence, and the patient's circumstances are such as to justify it, he should advise the latter to send him a suitable fee.

Query 10.—When a medical man, on proceeding to a case to which he had been summoned, but had been unable to give prompt attendance, finds that another had been sent for, and had already prescribed—what should be done?

Ans.—Simply make his bow and retire, if the parties should be strangers to him; or, if they are intimate friends, or the case that of a previous patient, and they express a very decided wish to retain his attendance in preference to that of the other,—he should recommend them to settle on friendly terms with the latter, and afterwards send to himself a message to renew his attendance.

Query 11.—When a patient, labouring under a complaint tending, if the proper means are not used, to a fatal termination, calmly and deliberately tells you that he does not wish his life protracted—what duty remains for you?

Ans.—To endeavour, in the first place, to bring him to a more hopeful and healthy frame of mind; and, whether you succeed in this or not, to tell him that so long as you continue in attendance, you must and will use the proper means for his recovery. The friends, at the same time, should, with due discrimination, be made aware of the state of matters.

Query 13.—When a junior member of a family applies to you, and states that he does so in consequence of having lost confidence in the family medical attendant—what is your proper course?

Ans.—If the applicant be arrived at years of discretion, and if the complaint be such as not to confine him to the house, or to obtrude itself upon the notice of the rest of the family, you should prescribe, and do what is necessary in the circumstances. If the patient has not come to the years of discretion, or if the complaint be such that it must of necessity, or may by probability, confine him to the house, or come to the knowledge of his family,

you should decline taking charge of the case till he has communicated with his parents or guardian, and obtained their sanction for your attendance. Before undertaking the case, however, you should endeavour to reconcile the patient to his ordinary attendant, by removing any prejudice or misconception he may be labouring under; although, when the objection is simply a decided want of confidence, no arguments that you can use will probably be of much avail.

Query 14.—Is a medical man to consider himself bound in honour to conceal from the demands of justice, information that has come to his knowledge through the necessary and unavoidable divulgements of professional intercourse, when such testimony might prove detrimental to his patient?

Ans.—He is bound by law to forward the ends of justice, and as an honest man and a good citizen he cannot and will not try to do otherwise. However, he should use his own discretion in cautioning his patient and the friends against imparting or exposing anything that could be turned to the party's disadvantage, and he should show no inquisitiveness beyond what is absolutely necessary towards the proper discharge of his professional duties. The Roman Catholic priest enjoys in this respect, by the established law of custom, I suppose, an advantage over the medical man; and very properly, for otherwise one of the most important rites of that religion would be rendered perfectly nugatory.

[This answer is not satisfactory. If a medical practitioner, when called in to any case, makes the discovery that his patient has committed some crime—no matter what—or is in hiding from the officers of justice, we consider that he is bound to keep the discovery as profoundly secret, as is the Catholic priest who has received the same information at the confessional; had he not been a physician he would never have made the discovery; as a physician, he is bound to keep it secret, and to avoid turning it in any way to his advantage, whether as a means of extorting a large fee or otherwise. Having completed the cure, he must leave his patient in the same condition, as regards his relations with the world at large, as when he found him; his last words must not be, "Call the police!" but "Go, and sin no more."]

Query 15.—Is it proper in a medical man to attend his own wife in her confinement?

Ans.—Perfectly proper, provided he is accustomed to this branch of the profession, and she and her friends have confidence in him: but if there be anything unnatural and difficult in the case, he should at once take assistance; or, if his feelings interfere with the proper treatment of it, he should leave it entirely in the hands of another. Such a course will, in the event of a fatal termination, prevent malicious remarks, or even judicial interference, and save the practitioner and the friends from subsequent regrets.

Query 16.—When sent for, in an emergency, to a midwifery case, in the absence of the practitioner whose attendance had been pre-engaged; and supposing him at last to arrive when the case is occupying your most serious attention, or even receiving your manual or mechanical interference—what is the proper etiquette to be followed?

Ans.—To resign the case at once into his hands—or, at all events, as soon as safely practicable, after explaining the state of matters to him, and obtaining, or taking for granted, the patient's consent to the transference. If your further assistance is wished by the practitioner who was pre-engaged, or by the patient with his consent, which it would probably be if the case were one of difficulty or danger, then you ought to remain. As to the remuneration, the answer would be as in query 9.

Query 17.—Do the prescriptions of a medical man belong to the patient or to the prescriber?

Ans.—The prescriptions written by a medical man are the property of his patients; and I do not think that the former is justified, under any circumstances, in taking away or destroying them. If he should do so, patients will be apt to suspect some sinister motive,—most probably a wish to conceal his malpraxis, or else to deprive them of the means of treating themselves in any subsequent similar attack.

Query 18.—In the case of an accident, involving responsibility on the part of any one, whether has the sufferer, or the person whose responsibility is compromised, the right to appoint the medical attendant?

Ans.—The patient himself or his friends, I think, have the prior right (whether they choose to exercise it in the first instance or not), as no consideration can be held to outweigh a man's interest in his own life and health; but the other likewise has a right to satisfy himself as to the competency of the attendance and skill which are bestowed on the case; and, whether he has any doubts on these points or not, may, for his own satisfaction, as-

sociate another along with the patient's own medical attendant; and of course it is the duty and policy of both the gentlemen to act in harmony for their patient's recovery, and, at the same time, to look after their respective clients' interests. In the question of remuneration, there is more of law than of medical ethics involved. Of course, if the party whose responsibility is at stake appoint a medical man to attend, it falls to him to pay the latter under any circumstances.

Query 19.—To what extent has the medical man the right to interfere in the selection of a druggist to supply the medicines he prescribes?

Ans.—Under ordinary circumstances, he has no right to dictate to his patients as to the druggist they should employ. When asked to whom the prescriptions are to be sent, which he will frequently be, the practitioner should say, "to any respectable druggist;" or he may mention the names of a few that he knows to be trustworthy, leaving the patient to make his choice. But if the practitioner is convinced by experience that any druggist does not keep his medicines of the standard strength, or otherwise does injustice to those who employ him, he is warranted —nay, he is bound, both in justice to himself and to his patients—to see that the latter do not put themselves within such a person's power. —*London Med. Gaz.*, Aug. 3, 1849.

304.—*On the Pneumonia of Children.* By M. VALLEIX.—Contrary to formerly entertained opinions, pneumonia is a frequent disease in children; but it is to speak too vaguely to treat of children in the mass, as great differences exist, according to their ages. We may take three periods into account: 1st, from birth to the second year; 2d, from two to six; and 3d, from six to fifteen. And as a general statement, making allowance for even numerous exceptions, it may be said that the disease decreases in severity from the first to the third of these periods. Careful researches have proved that during the *first two years* pneumonia is more frequent, more dangerous, more rapid, and oftener double, than at any other period of life, except *extreme old age;* and the similarity of the disease, at these two extreme periods of life, is in many respects very remarkable. During even the *first period*, the danger of pneumonia much depends upon the part of such period it occurs at. Whatever the state of the child's health may be, if attacked during the *first month* it may be regarded as doomed to certain death; and from the first to the sixth month there is little hope of saving it, if the attack be at all severe. From the sixth to the twenty-fourth month the cures becomes more frequent, but the prognosis is still very bad, and should be most guarded, until convalescence is quite complete. The general symptoms may seem to amend, and the local ones to make little progress, but in from twenty-four to thirty-six hours a recrudescence occurs, which proves rapidly fatal. If the patient continue uninterruptedly to improve during thirty-eight hours, the convalescence is almost always definitive. The *local symptoms* should be especially watched; for it is not here as in adults, in whom we often see local symptoms continue for a considerable time after the general ones have diminished, without any cause for alarm. If, in the infant, there is not in twelve hours a notable improvement in the local symptoms, a fatal relapse must be feared. Another peculiarity is the *lobular* form of the disease, usually a consequence of an already severe attack of capillary bronchitis. At this period, too, as in advanced age, *double pneumonia* and pneumonia of the *apex* are common. M. Valleix believes that there is some confusion in the statement of MM. Bailly and Legendre, that the anatomical condition of the lungs in these cases is due to a persistence of the fœtal state; for although a condensed state of the pulmonary tissue, disappearing on insufflation, may very often be found in very young infants, yet it is an error to suppose that all the cases usually described as infantile pneumonia are of this nature. He has, in such cases, met with even a denser hepatisation than in the adult, the lung rapidly sinking in water, and being quite impervious to insufflation. The cases described by these writers would not, from their symptoms during life, be considered by good observers as pneumonia.

In proportion as we approach the *second period*, the pneumonia loses its lobular character, and approaches nearer to that of the adult, while its fatality diminishes also. Indeed, especially during the last two or three years of this period, the *benignity* of the disease is remarkable; and little alarm need be excited, except if the child is already an invalid, when the supervention of pneumonia is exceedingly dangerous. By benignity it is not meant that the symptoms are slight, but that the cure is so sure; for, in fact, the symptoms have a very alarming appearance, and yet, in spite of them, amendment takes place in from two to four days, after which time the cure goes on rapidly.

In the *third period*, the disease still more resembles that of the adult, and is still benign. A distinguishing circumstance at some part of this period is the appearance of expectoration.

As a general rule, the younger the child, the greater is the difficulty of the diagnosis. For auscultation, very young children should be held, by an assistant placing his hands under the thorax and belly, when examination can be made, especially as, in this position, the child usually ceases crying for awhile. Older children should be held on the mother's arm. In a case, in which auscultation was very difficult, M. Valleix availed himself with success of the observation of the increased thoracic vibration, indicated by Monneret.

Treatment.—During the third period, the child is treated as the adult. In the second, we must be more chary of our means, remembering that there is a natural tendency to cure. One bleeding usually suffices, and antimony should be reserved for only severe cases, and used with great caution. With still greater caution should it be given in the first period. Still if there is great or increasing hepatisation, it is to be used in divided and infrequent doses. Small cuppings are very preferable to leeching, and mild opiates are too much dreaded by practitioners. Blisters should be wholly discountenanced, especially in the very young.—*Bul. de Thér.*, vol. xxxvi, pp. 97-103, and *Med. Chir. Rev.*, Oct. 1849.

305.—*Epidemic Cerebro-Spinal Meningitis.* By Dr Ferrus.—This dreadful malady, which prevailed towards the end of 1848 and the commencement of 1849, at Petit-Bourg, is carefully described in a memoir, presented some time back, by Dr Ferrus, to the Academy of Medicine. Unlike preceding epidemics, this one attacked children.

The symptoms are extremely well marked and constant. The disease always commenced with a violent rigor, followed by vomiting for some hours, and then intense headache. In all the cases excessive sensibility of the skin existed along the whole of the spinal column, and particularly at its lower part. All the patients likewise presented more or less rigidity of the cervical column, almost amounting to opisthotonos in some cases. (The same stiffness and rigidity are a frequent symptom in the ordinary hydrocephalus of children.) The limbs were often agitated by convulsive movements, and contraction of the extremities existed in all the cases except one.

The state of the pupil was not constant, being sometimes dilated, sometimes contracted, or alternately so. The delirium was more or less violent in all cases except one; but coma was seldom profound, and in two cases it was absent.

The pulse was ordinarily, and during the whole course of the malady, depressed, slightly accelerated, or even slower than natural; seldom above 100, never beyond 104.

Of the seven cases described by Dr Ferrus, two ended fatally in six days; two in four; one in a few hours; one favourably, in fifteen days; and one little patient, after having remained four months in a complete state of idiotcy, recovered completely.

Post-mortem examination revealed the existence of lesions, which might easily be deduced from the symptoms. The principal were inflammatory injection of the meninges, chiefly remarkable—first, along the fissure of Silvius, and on the pons varolii; and, secondly, along the spinal marrow, and particularly at its lower part. In three cases there was abundant suppuration of the sub-arachnoid cellular tissue; and in one of these the pus had followed the sheath of the optic nerve into the interior of the eyeball. The quantity of pus underneath the arachnoid of the spinal marrow was very considerable. In one case, which terminated fatally, there was nothing more than simple injection of the membranes. The cerebro-spinal substance was healthy.

One case was remarkable from its similarity to typhoid fever. The deep stupor, the dark state of the tongue and teeth, and the delirium, might have led the medical man into error; but, on the other hand, the throwing back of the head, with stiffness of the neck, contracture of the limbs, and absence of diarrhœa, could not deceive him.

The treatment employed was energetic, though unavailing.

An epidemic of the same kind prevailed some years ago amongst the garrison of Strasbourg, and has been well described by Dr Tourdes. The above notice may afford a means of comparing its symptoms with those of ordinary tubercular meningitis. Rigors and furious delirium are the chief symptoms in which the epidemic differs from the tubercular form. The effusion of pus underneath the arachnoid, and especially over the spinal marrow, is its main pathological lesion.—*Med. Times*, Sept. 8, 1849.

306.—*Anemia following Rheumatism.* By Dr O'Ferrall.—There have been

several cases of rheumatic fever lately in St Vincent's Hospital, Dublin. In commenting on those in the wards, Dr O'Ferrall stated that he was induced to believe that this disease had a tendency, in its latter stages, to produce phenomena connected with a diminution of the globules of the blood. Some modifications in the constitution of the blood during rheumatic fever had been already observed. It had been ascertained that, at an early period of the disease, the fibrine is increased; but it would appear that, subsequently, there is, in many instances, a diminution of the colouring matter. The attention of Dr O'Ferrall was first called to the subject by observing that, in cases with endocardiac complications, after the employment of depletion and mercury, a cardiac bruit, of a different character from that which originally presented itself, continued to persist, notwithstanding the steady employment of the usual means for subduing inflammatory action. By-and-bye cases terminating fatally came under his observation, in which, although this bruit was present to the last, no morbid appearances could be detected in the heart, upon post-mortem examination. Afterwards he found that a râle musicale in the cervical vessels very constantly accompanied this peculiar cardiac bruit; and he was led to suspect that, after the subjection of the inflammation by bleeding and mercury, an anemic condition followed the use of these remedies, which would require a very different treatment for its subdual. He accordingly ordered chalybeates, as in an ordinary case of chlorosis, and found the cervical and cardiac bruits to disappear under the use of this remedy. As yet he imagined the anemia to be due to the effects of the antiphlogistic treatment employed in combating inflammation; but during the last few years he has had repeated opportunities of observing, that a râle musicale in the neck, and a bruit accompanying the first sound over the aortic valves, very frequently coincide with the decline of rheumatic fever, in cases where no active and weakening remedies have been employed; and he has been thus led to the conclusion that the natural tendency of the disease in its advanced stages is to produce a diminution of the hæmatosin of the blood, evincing itself by its ordinary physical phenomena. This observation is one of very great practical importance, teaching us the necessity of discriminating between those cardiac sounds produced by the participation of the heart in the general rheumatic disease, and those arising from deterioration of the blood. The treatment in the two cases must obviously be of a totally different nature.—*Med. Times*, September 15.

307.—*Curability of Phthisis.* By M. Le Couppey.—According to the author, we have in our hands a pharmaceutical preparation, which possesses the power of causing tuberculisation to retrograde, and of reducing it to zero. This is the mercurial ointment (*Codex*, No. 559) given in the dose of one to eight grains in the form of pill—one-half in the morning, the other in the evening. Under the influence of this modifying agent, employed during the *first* stage, the morbid phenomena soon decrease, and ultimately disappear, and some of them in a constant and invariable order. Thus hæmoptysis, when it exists, disappears immediately, even after having resisted other remedies. Sweating disappears next; then comes the cessation of the cough; and, lastly, that of the symptoms revealed by percussion and auscultation. In short, the cure is perfect, and is effected in the course of a few months. The author concludes by saying, that we can thus invariably combat pulmonary tuberculisation successfully, provided it has not reached the last stage. The curability of phthisis is thus, by M. Couppey, determined in the affirmative. — *Gazette Médicale*, No. 32, 1849.

[M. Couppey says nothing as to whether the constitutional effects of mercury were observed in any case. Neither does he give any cases or statistics. And he says nothing as to diet and other circumstances, which must exert considerable influence in a disease several months under treatment.

We give the above more from the confidence with which it is related by the author, than from any great faith in the probable success of the treatment recommended. A trial, however, could do little harm, if no good.]

III.—PRACTICE OF SURGERY.

308.—*History of a Case of Ligature of the Common Iliac Artery.* By Dr Peace, Pennsylvania.—This case was published in 1843. The artery had been tied in 1842. The patient was discharged from the hospital, cured, six weeks afterwards, and five months after the operation, the tumour, which had been very large, was

found to be hard, greatly reduced in size, and free from pulsation. He returned to a laborious occupation, and fifteen months after the operation his attention was directed to a re-appearance of the tumour. On presenting himself, the tumour was found to be about the size of a small orange, soft and fluctuating, with the integuments covering it discoloured. In a few days ulceration took place, and he died after repeated hemorrhages. On dissection, it was found that the ligature had been placed on the artery just above its bifurcation, where it was perfectly sound, and that the blood had been furnished to the tumour by the collateral vessels.

On the patient's re-admission, ligature of the aorta had been thought of by Dr Peace, with the view of prolonging the patient's life, but it was found that pressure on this great trunk at its lower part did not arrest the flow of blood; and, on dissection afterwards, the reason of this appeared, from the collateral arteries being given off above "the point at which it is prominent upon the vertebræ."

In the same report a case is noticed as having been described by Dr West, in February last, as showing how the circulation has gone on after obliteration of the aorta. In tracing the aorta beyond the origin of the great vessels of the arch, its cavity was found to be entirely obliterated immediately beyond the attachment of the ductus arteriosus. The stricture was a narrow one, and beyond it the vessel resumed very nearly its natural dimension, and so continued throughout its course, "giving off" the usual branches. The internal mammary and the epigastric arteries were as large as the internal iliacs, and the former were tortuous.—*Medical Examiner*, 1849.

[A considerable number of cases, in which complete obliteration of the aorta did not arrest the circulation, have been recorded, and in several of these the obliteration occurred just beyond the point where the obliterated ductus arteriosus is connected to the arch of the aorta, that is, shortly after the origin of the left subclavian. In these the blood is found to reach the aorta beyond the obliteration, by its enlarged intercostal arteries, which obtain it from the internal mammary and superior intercostal of the subclavian, and the thoracic branches of the axillary artery; and in the abdomen, by the enlarged diaphragmatic and lumbar arteries, which are fed by the internal mammary, and through it by the epigastric; but the supply to the lower extremities is largely re-inforced by the strong current from the subclavian, through the enlarged mammary and epigastric branches, to the external iliac.

It is to be regretted that the American report does not give a more detailed account of the collateral vessels by which the circulation was continued, more especially in the case of ligature of the common iliac.

In this case the circumstances under which it was proposed to tie the aorta are singular. The common iliac artery being already impervious, no effect could be expected to be produced on the diseased side, unless the ligature were placed on the aorta above the origin of some of the lumbar arteries (through which the collateral circulation is chiefly carried on to certain branches of the external and internal iliacs); which could scarcely be safe, either as regards the success of the endeavour, or the effect upon the circulation.]

309.—*Lithotomy in America. Report of Committee on Surgery.*—Dr Dudley, Professor of Surgery in the Transylvania University, is said to have, up to 1846, operated in 185 cases of stone, of which number 180 are reported as successful. This remarkable result is not owing to a selection of cases having been made, as three only had been refused, but is attributed to the "thorough preparation of the general system" made by Dr Dudley preparatory to the operation.

In the Pennsylvania Hospital, from 1752 to 1848, eighty-three patients had been cut, invariably by the lateral method, and, except in a few instances of very young children, the gorget had been used, and of these ten died. Of the eighty-three, five were females, none of whom died; and out of thirty-six of the eighty-three, in which the ages are given, twenty-two were under ten years of age, and ten under twenty. These thirty-six are those which occurred since the year 1832, and of them only two died, and these were children at three and four years of age.

Dr Mettawer of Virginia, has operated in seventy-three cases, two of which proved fatal, one from prostatic hemorrhage, the other from spasm of the ilium.

Dr John C. Warren has operated on thirty patients, of whom two died; one on account of an error in diet, the other had a purulent effusion, owing to the great size of the stone, and the force required to extract it.

Dr Marsh of Albany, and Dr Eve of Georgia, have operated each seven times,

and all of the cases were successful. Although the bilateral operation of Dupuytren is occasionally performed, the lateral operation, with the gorget, is the method in common use.

Supposing all of the patients to have been males in the preceding accounts when the contrary is not stated, and adding the whole of the males together, we have in 380 cases only seventeen deaths, or about one in twenty-two.—*Medical Examiner*, February 1849.

310.—*Lithotomy*—117 *Calculi, weighing together four and a-half ounces, successfully removed.* By Paul F. Eve, M.D.—The largest weighed ʒij. and 38 grs., the two next in size each 78 grs., and the smallest 1 gr. The calculi were four-sided, and were found, on analysis, to consist of phosphate of lime.

The patient, forty-three years of age, received an injury of the back twenty-five years ago, after which he had difficulty in making water. For the two last years this difficulty became so great, that, to discharge urine at all, he had to assume the horizontal position, and push up the bladder with his fingers introduced into the rectum. Much matter also came by the urethra. There was a swelling on the right side of the perineum; and when he sat down on the edge of a chair, he felt a crepitating sensation as if a ball of snow was being crushed in the perineum.

The swelling in the perineum was incised, a quantity of pus escaped, and fifty calculi were removed. They lay in a cavity which communicated through the bulbous part of the urethra with the bladder, which lay two inches deeper. The lithotomy incisions were completed, and sixty-one stones removed from the cavity of the bladder. The operation occupied an hour. The patient made a good recovery, and preserved his virile powers.—*Amer. Jour. of the Med. Sciences*, April 1849.

[The author reckons this case of interest on account of the great number of the stones, and the occurrence of ulceration by which they were in progress towards a spontaneous discharge by the perineum. Partial or complete cases of the latter occurrence are related by Brodie and Langenbeck; and Mr S. Cooper refers to a case, recorded in 1822 in Germany, in which 398 calculi, varying from the size of a pea to that of an olive, were found in the bladder after death. By analysis they were found to consist of phosphate of lime, phosphate of magnesia, and uric acid.]

311.—*Re-union of Parts, after Total Separation by Incision.* By Mr Denny, of Stoke Newington.—Although I am aware that there are several cases on record of portions of the thumb and fingers having become re-united and re-organised, after separation for a short period, still they are not so numerous, nor is the principle of grafting in the practice of surgery so well established, as to render it useless to add to their number, or to corroborate its practicability by reporting any successful case that may occur.

A labouring man applied to me to dress the thumb and forefinger of the left hand, having, as he stated, met with an accident whilst cutting or chopping a handful of grass with a sickle. Upon examination, I found he had by a clean incision, cut out of the thumb a triangular-shaped piece, the incision extending from the end down the centre of the nail, nearly to the root, then outwards towards the forefinger. The piece thus disunited consisted of the portion of nail described, integument, muscle (?), and a minute portion of bone. From the finger he had merely sliced off a piece of muscle and integument on the side next to the thumb. I sent him back the distance of two miles, to search amongst the grass for the dismembered portions, which he succeeded in finding, and which, upon his return, I carefully washed with warm water, and adjusted in exact apposition to the surfaces from whence they were cut. I freely applied collodion, so as effectually to exclude the atmosphere, and prevent any further hemorrhage, and with narrow pieces of strapping held them firmly in the position in which I had placed them. The result has been the perfect re-union of both pieces, leaving little or no cicatrix.

I should mention that the period that elapsed from the occurrence of the accident to the replacing of the parts was four hours; also that the pain, which was very acute, from the exposure of the cut surfaces to the atmosphere, ceased immediately that the parts were replaced, and the man experienced little or no pain afterwards.—*Dub. Med. Press*, Sept. 26, 1849.

312.—*Death from Impaction of Food in the Glottis—Deficiency of the Epiglottis.* By Mr Gabb, of Hastings.—Mr J———, aged fifty, had often complained of his food "going the wrong way." He was in the habit of eating very greedily, and on this occasion hurriedly tried to swallow a large piece of mutton chop. He began gulping, but in a few seconds seemed relieved; again he commenced doing so, when a neighbour came in, and, with the handle of a tablespoon, tried to

ram the meat down his throat. He died almost immediately afterwards. On examining the parts, a large piece of mutton, weighing half an ounce, was found firmly impacted in the rima glottidis, requiring some force to dislodge it. The woman, no doubt, with the handle of the spoon, had forced it down.

A peculiarity of the case was the almost total absence of an epiglottis, the rudimentary one present measuring not more than a line and a-half.—*Dublin Med. Press*, Aug. 22.

313.—*Cynanche Tonsillaris — Sudden Death by Asphyxia from Abscess opening into Pharynx.* By W. England, M.D.—Mrs B., aged thirty, had had frequent attacks of quinsey for many years, and, having always recovered from them without their being attended by dangerous symptoms, she refused having any medical assistance until a week after the commencement, on August 12th, of her present attack. She was then seen by Mr Burman, who found the case one of ordinary cynanche tonsillaris. She improved under the treatment followed, and was able, on the 20th, to follow her usual occupation at the bar of an inn, but shortly after she had retired to bed, her husband was alarmed by hearing a rattling sound in her throat, which was followed by suffocation. In less than a quarter of an hour Mr Burman was at the bed-side, and found her sinking from asphyxia, and on Dr England's arrival, in a minute or two, she was dead.

At the post-mortem examination, the trachea and larynx were found filled with purulent matter, the mucous membrane being healthy, without any perforation. Both tonsils were much enlarged, but neither had suppurated. Dr E. continues, "The only case that I can find recorded that bears any analogy to the case of Mrs B., is one published by Dr Watson, in the third volume of the 'London Medical Gazette'; but in that case the asphyxiating cause was coagulated blood from a branch of the lingual artery being perforated by an abscess of the pharynx opening into the fauces below the left tonsil, on a level with the epiglottis. In the case of Mrs B. also, the tonsils had not suppurated, and I am inclined to think the abscess was pharyngeal, seated likewise under the left tonsil. That we were obliged to limit the post-mortem inspection is much to be regretted."—*Prov. Journal*, Sept. 5, 1849.

314.—*Wound of the Aorta by a Foreign Body arrested in the Œsophagus.* By W. F. Morgan, Surgeon to the Bristol Infirmary.—I was sent for late in the evening to a lady, sixty years of age. She was suffering acute shooting pain in the epigastric region, increased by any movement, and especially by the act of deglutition. Pressure by the fingers also increased the pain, but pressure by the hand rather lessened it. She was much distressed, and anxious for relief. There was no other symptom of illness. The pain had commenced suddenly, during her dinner, and was considered by herself and those who were with her to be one of her usual attacks of "spasm in the stomach." It was stated that she had taken some vegetable matter hastily, which lodged for a short time in the chest before it passed into the stomach, but she felt nothing from it except a transient soreness, and it was not until afterwards that the pain came on. In a few minutes vomiting took place, and the pain had continued in spite of mustard poultices and other means. Notwithstanding the conviction of the patient and her friends that it was only one of her old neuralgic seizures, and that it was impossible that she could have swallowed any foreign body, I strongly suspected the existence of a pin or something sharp sticking in the upper part of the stomach. The localization of the pain to a point just below the ensiform cartilage, its shooting or pricking character, its aggravation by every movement, and particularly by the act of deglutition, and its first occurrence during dinner, were not improbable grounds for such an inference. She remained much the same for eight days, the pain continuing, more or less, in the same spot, and being of the same character. For two days, however, she was decidedly better, during which period she had a similar pain in the face and shoulders, which rather confirmed the impression that it was a neuralgic attack. The pulse had no increased frequency; the tongue was clean; the skin cool; there was no thirst nor sickness. The only symptoms present were the epigastric pain and anorexia, with want of sleep, from the severity of the pain, although she had large doses of morphia. A variety of treatment was tried in vain. On the morning of *the ninth day*, as she was leaving her bed for the night table, she became very faint and fell on the floor. I saw her shortly, and found her almost pulseless, and very pallid. The liberal administration of stimulants somewhat restored her, and then for the first time since the day of the accident she was sick, and vomited about six ounces of fluid arterial blood; she had also passed from the bowels during syncope a small quantity of dark blood, like treacle in co-

lour and consistence. The pain, which had returned as bad as ever, had now entirely ceased, and excepting a sense of a great weakness, she felt quite well, and wanted food. During the next forty-eight hours she passed three or four motions, consisting chiefly of the same black matter, but there was no return of sickness. She gradually recovered, to a considerable degree, from the state of faintness, enjoyed her food, wanted to sit up, and remained free from pain. During the last night of her life, she slept comfortably, and awoke at five in the morning with sickness. She vomited about eight ounces of fluid arterial blood, and immediately expired. Her death took place *ten days* from the date of the accident, and forty-eight hours from the commencement of syncope.

An examination was readily obtained, which cleared away all doubt as to the nature of the case. The stomach was distended by an immense coagulum of fluid blood, recently effused. The colon was distended in like manner throughout the whole of its extent, by the same kind of black treacly matter which had passed during life, evidently blood acted upon by the intestinal acids, and probably effused some time before. The small intestines were free from blood. Not the slightest lesion, nor any morbid appearance, could be detected in the stomach or bowels. On slitting up the œsophagus, an opening was observed through which a probe could be passed into the descending aorta, an inch below the left subclavian artery, the œsophagus and aorta being close together. The opening was the third of an inch in length, with torn and irregular edges. The wound of the aorta was smaller, and situated rather lower, so as to make the communication somewhat valvular ; on the opposite side of the œsophagus was an abrasion of the mucous coat, evidently caused by local injury.

Thus, then, the cause of death was sufficiently manifest. It was clear that a wound had been made by some foreign body lodging in the œsophagus, and perforating the aorta through it. On carefully examining the contents of the stomach and bowels, a small piece of bone was found, which I have little doubt was the cause. It was thin but strong, of an irregular outline, half an inch in length, and a quarter of an inch wide at the centre, becoming narrower at each end. It had been probably longer and more pointed originally.

In his remarks on this case, Mr Morgan discusses the question as to the propriety of the introduction of the probang in such cases. He concludes that, in a case where the body is known to be hard and sharp, it is better practice not to endeavour to use the probang, when it has reached low down, so as to be out of the reach of the finger or extracting instruments.

[A case, in some respects very similar to this one, was related by Dr James Duncan, in 1844, in the *Northern Journal of Medicine*.

The foreign body—a couple of false teeth, fitted in a sharp projecting plate—was arrested at the same part of the œsophagus, but appeared to have descended into the stomach. *Nine days* afterwards the patient died from hemorrhage ; and, on dissection, the aorta was found to be perforated about half-an-inch below the origin of the left subclavian. We refer to Dr Duncan's interesting paper for a notice of a number of cases of arrest of foreign bodies in the œsophagus, and observations on the treatment and termination of such cases.]

315.—*Foreign Body in the Rectum.*—M. Velpeau related at the last meeting of the Academy of Medicine, a curious case of this kind which had presented itself to him in the morning. A man was admitted into the hospital with a tumour, which projected under the false ribs on the *right* side. It was easy to trace the form of the tumour through the walls of the abdomen, and the patient confessed that it was produced by a long *Eau de Cologne* bottle, which he had introduced into the rectum. Although the story appeared so extraordinary, it turned out to be true ; for the neck of the bottle was easily felt on passing up the finger ; it was then seized, and the whole bottle extracted with facility. It was twenty-eight centimetres in length, and as the foreign body disappeared, so did the tumour of the side; in fact, it was impossible to doubt that the tumour depended on the projection of the bottle. The patient felt no inconvenience after the extraction of the substance; but it seems strange that any inflexible body could penetrate so far, without producing any lesion whatever.—*Medical Times*, September 8, 1849.

316.—*Large Nævus of the Lower Lip removed by Ligature.* Reported from London Hospital.—January 4, 1848. William Fletcher, a bricklayer, aged twenty-three years, was admitted into the London Hospital, under the care of Mr Luke, desiring to be relieved of the incumbrance arising from an immensely enlarged lower lip, caused by a nævus, which had existed from his earliest recollection.

An attempt was made by Mr Luke, in 1843, to arrest the development of the disease by the passage of a series of threads through it, which, having caused considerable inflammation, was attended by temporary success. Of late, however, the lip has rapidly and enormously increased, and has given rise to very great annoyance, both in speaking and taking food. There is also extensive discoloration of the skin, over the lower part of the face, the neck, and upper part of the chest; but this was not in progress of extension, and gave no inconvenience. For the purpose of removing the large mass of diseased lip, Mr Luke adopted the following proceeding:—

A ligature, three yards in length, was armed with nine curved needles, which were placed about twelve inches apart from each other. The first needle was passed through the lip, from its inside near the left angle, a little beyond the limits of the tumour; the second, through the lip at a little distance to the right; the third, about the same distance, still more to the right; and so on with the other needles, until the right angle was reached, the last needle being passed a little beyond the tumour on the right side. In this way seven of the needles were used; the remaining two, being unnecessary, were removed. The needles were next cut off, and eight loops of ligature were thus left. Upon tightly tying the ends of these loops, respectively with each other, the whole of the tumour was enclosed within them, and its circulation stopped. This was done most effectively, by reason of each ligature embracing a small portion only of the lip, a proceeding which had the additional advantage of not producing any puckering or drawing in of the lip.

The tumour became livid and gangrenous, and sloughed off on the 18th, leaving a sore of a pretty sound and healthy appearance. The report on February 19th states: The lip has been healed for some time, and the patient has this day been discharged from the hospital cured. The deformity caused by the tumour, with the exception of the mere mark of the cicatrix, has, by this operation, been completely and satisfactorily removed, while the patient, possessing the power of free motion of the lip, has got rid of an inconvenience which had hitherto rendered his life miserable.—*Med. Times*, Sept. 1, 1849.

317.—*Hemorrhage from the Tongue treated with Tincture of Matico, after other means had failed.* Reported from London Hospital.—Oct. 9, 1848. William Baker, fruiterer, aged thirty-four years, states, that on the 6th instant he received a blow upon the chin, whilst the tongue was protruding from the mouth, which caused that organ to be wounded by the teeth, the consequence of which was hemorrhage, so copious and uncontrollable, as to render it necessary to apply to several surgeons for assistance; but, as none of them succeeded in suppressing the bleeding, he was brought to this Hospital in a very weak state, and placed under the care of Mr Luke. A piece of the nitrate of silver was immediately pushed into the wound; but, notwithstanding this, the bleeding still continued. A saturated solution of alum was next applied by means of pieces of lint, but still without success; and, at last, the tincture of matico was had recourse to, and used in the same way as the solution of alum, which, fortunately, had the desired effect of permanently arresting the hemorrhage.

The patient states, that whenever bleeding from his nose takes place, it generally continues for several days; that some time ago, when he was bled from the arm, it was found to be very difficult to stop the blood, which oozed through the compress and bandage for nearly four days. He further states, that he was a patient in this hospital some years back, on account of hemorrhage from the urethra, which continued for the space of seven days, and was at last stopped by keeping a large catheter for a long time in the urethra. He had also been, it appears, at another time in this hospital, in consequence of having received a wound on his hand, which bled for several days, notwithstanding that continual pressure was kept up by compresses; thus showing a very strong hemorrhagic diathesis; and, on inquiry, it is found that all the members of his family have the same disposition, particularly his father.

In the above case, the patient, after having been one week in the hospital, without any return of the hemorrhage, was discharged, with directions to take tonic medicines, and to use such other means as are likely to have a tendency to strengthen his constitution and to improve his general health.—*Med. Times*, Sept. 1, 1849.

[We may here refer to the notice given in the last number of our Retrospect, of Dr Hargrave's strong recommendation of a solution of matico leaves as a styptic.]

318.—*Compound Dislocation and Removal of the Astragalus.* By R. S. Nunn, Esq., Surgeon to the Essex and Colchester Hospital.—The patient was a robust farmer. He was thrown from a cart when travelling at a moderate pace, and fell on the side of his foot. On removing the boot

and stocking, the astragalus dropped into the surgeon's hand, held only by a few ligamentous fibres on the inside. The wound was large enough to admit the fingers for an examination of the joint, and there was no other displacement, or fracture.

Very slight constitutional symptoms followed. Leeches were frequently applied to the joint. Proper position and perfect quiet were attended to. On Feb. 28, more than a month after the accident, his health was perfectly good, all signs of inflammation had disappeared, the granulations of the wound were healthy, the suppuration sufficient and good, and he was able to raise his foot without assistance. From this time to the present he was gradually improved, and is now able, by the aid of sticks, to walk about the house, and get into his gig. The os calcis is approximated to the tibia and fibula, so that the limb is shortened to the extent of an inch. There is increasing motion in the joint, and he can bear almost the entire weight of his body on the injured limb.—*Prov. Journal*, August 22, 1849.

319.—*Acute Inflammation of the Prostate Gland, occurring after the use of Nitrate of Silver Injection.* By Mr Henry Smith.—Three weeks before he applied to Mr S., the patient, aged twenty-eight, caught gonorrhœa, for which he had been ordered nitrate of silver injection, the strength of which is not stated. This arrested the discharge, and caused great pain and bloody urine, notwithstanding which it had been continued. When he applied to Mr Smith there was great irritability of the bladder, and water was passed almost constantly, but only a few drops at a time, and that with extreme pain. Not being relieved by treatment directed against irritability of the bladder, and inflammatory fever having ensued, Mr S. next day examined the rectum, and found the prostate enormously enlarged, so as almost to close the cavity of the rectum. It was very tense and painful on pressure. There was no tumor in the perineum.

We need not give the details of the treatment and progress of the case. The ordinary general and local means were employed. Next day the swelling had increased, but there was no fluctuation. The urine deposited lithates and mucus copiously. A catheter was introduced, to make sure that the swelling did not arise from retention. It passed the prostate easily, but caused great pain. Next day all the symptoms were much relieved, and the case progressed favourably. In six days the prostate had regained its usual size, and the patient was able to resume his employment.

Had suppuration occurred, Mr Smith would have punctured the prostate from the rectum, rather than allow the matter to make its way into the gut, and leave, perhaps, a troublesome fistula. Whilst he entertains a high opinion of the advantage of nitrate of silver injections for gonorrhœa, when they are used with caution, and their effect watched, he has seen several cases where it had produced unpleasant and severe results—swelled testicle—temporary retention of urine—and great irritability of the bladder.—*Medical Times*, June 23, 1849.

320.—*Neuralgia of the Penis.* By Dr Spengler.—This case occurred in a man aged forty, who had been recently cured of gonorrhœa, and is reported in *Casper's Wochenschrift*, No. 46, 1849. During connection with his wife for the first time after a cessation of ten weeks, he became the subject of intense pain in the glans penis, which was repeated on each repetition of intercourse. It also followed erection without emission. In the intervals he was quite free from pain. Various methods of treatment were adopted without benefit, until Dr Spengler cauterized the urethra, the repetition of which, four times, completely cured him.—*Provincial Journal*, August 22, 1849.

321.—*Successful Amputation at the Hip-Joint.* By M. Guersant.—The operation was performed on 28th December 1847, for a cancerous disease of the femur, on a child aged five years. Chloroform was used. Syncope ensued, from which the patient was recovered by stimuli. Twenty-two days after the operation the child remained well.—*Journ. de Med. et de Chir.*, February 1848.

[The case is successful as far as the mere operation is concerned, but it would have been desirable had the publication of the case been delayed until time was allowed to decide whether the disease was eradicated. In a somewhat similar case (malignant disease of the femur), which was related in 1844-5 in this Journal, the operation was performed on a boy, aged thirteen, by Dr Handyside, with complete success as regards the operation; but the patient died four-and-a-half months afterwards, from malignant disease, which appeared first in the head and then in the stump.

An interesting case of recovery after this operation was related lately by Professor Syme in this Journal (April 1849, Med.-Chir. Transactions.) Although the

patient, aged 22, was much reduced from an extensive necrosis of the femur, following amputation through the thigh, on account of a severe injury of the leg, the operation had been completely successful.

It is worthy of remark, that the operation has been successful now in four cases in which it has been performed after previous amputation through the thigh; the other cases having occurred in the practice of Sir A. Cooper, Mayo, and Mr Cox of Birmingham, in at least two of which it was performed on account of neuralgia of the stump, the patients not being so much reduced as in the case of necrosis above referred to.]

322.—*Incomplete Fracture of Bones.*—In the *Veterinarians* for July, August, and September, are contained a series of interesting cases of incomplete fracture of the limbs, chiefly of horses, by Messrs Broad, Percivall, Younghusband, and Nelson. They are remarkable from having been almost all unsuspected by their owners, in some cases by their doctors. Thus we have two giving way while being fomented for bruises, one of one day, and another of several days' standing, and several doing so while the horses were at work, though lame from a kick or blow previously received which had caused the fracture. One gentleman had been warned that his mare had a broken leg; nevertheless, the swelling having disappeared after a few days' fomentation, he, notwithstanding advice, took the animal out, and rode her about twelve miles, when she carried him "like a stag." He took her out again in the afternoon, and when about a mile from home the thigh bone snapped while he was in the saddle.

Mr Wilson likewise mentions the case of a gardener near Sheffield, who, while firing a gun as he thought perpendicularly, received a punch on the shoulder which hurt him; the pain, however, soon subsided, and he was only twice reminded by it of his accident—once when wheeling a loaded barrow, and again when whetting a scythe—till about three weeks after, while engaged in ringing a pig, the clavicle divided, one end almost coming through the skin. *All* these fractures were *oblique*. Here, then, is even a more extraordinary case than M. Jobert's (de Lamballe—vide Month. Ret. p. 103); besides sufficient corroborative evidence from veterinary surgeons, to show that such cases are not impossible,—nay, that they are possibly not so very rare,—though they may too often be passed over as instances of a previously incorrect diagnosis.

323.—*Secretion of Black Matter by the Meibomian Glands.* By Mr Hewlett, of Harrow.—The patient, a boy aged sixteen, complained that the eyes were painful and hot, and that everything looked dark. There was some conjunctival inflammation. The lids, especially the lower, appeared externally and internally as if they had been smeared with some black substance. The boy had not been engaged with any substance of this colour, and could not account for the appearance. On examining the part with a lens, each meibomian gland could be readily distinguished, filled with this dark matter. A zinc lotion, with some diluted citron ointment, was directed to be applied, and the boy was to be placed under strict observation, but without detecting any imposition. The discharge continued some days, but gradually disappeared, leaving for some time afterwards eight or ten of the meibomian canals still prominent, and loaded with this dark matter. The vision became clear as the discharge diminished. *Provincial Journal*, Oct. 3.

IV.—MIDWIFERY, AND DISEASES PECULIAR TO WOMEN.

324.—*Successful Case of Cæsarean Section, by Mr Cluley;* reported by T. Radford, M.D., Manchester.

The subject of this case had felt slight pains, according to the account of the friends, about a week; but Mr Cluley thought that true parturient pains had only existed about three days, and were so slight as not to require his interference. On Sunday, May 20, 1849, at nine o'clock, although the pains were still trifling, the head of the infant was felt, and the os uteri found dilated to the size of a half-crown piece. Mr C. unintentionally ruptured the membranes at this stage.

The pelvis was very considerably altered from its natural shape; its sides were flatter; and the posterior division of the ilia, especially on the left side, projected backwards; and the upper portion of the sacrum, and the lower lumbar vertebræ, had sunk in an inward and downward direction, so that a great concavity was perceived here. The uterus inclined rather to the right side, and stood considerably more forward than usual; its tissue felt soft and compressible. The

fundus or upper division of the organ was fluctuant, and rounder in shape than it generally is after the discharge of the liquor amnii, which led to the conclusion that a great portion of this fluid still remained.

By a vaginal examination Dr R. found the lower aperture of the pelvis very considerably diminished by the close approximation of the rami of the ischia and pubes, which nearly destroyed the arch, and by their jutting forward there remained only a narrow slit, which would not admit the point of the finger. In the transverse diameter, two fingers could only just be placed between the tubera ischii; the antero-posterior diameter was also much shortened by the coccyx and the lower part of the sacrum being considerably incurvated. This great diminution in the outlet rendered it difficult to measure the brim, so that it was necessary to carry the hand very far backwards to accomplish it. Its figure was tripartite, or composed of three divisions. This alteration in the brim was occasioned by the falling downwards and forwards of the upper part of the sacrum, and the lower lumbar vertebræ, which inclined a little more to the left side, and by the body of the ossa pubis and ischii being forced backwards and inwards, and by the jutting forwards of the symphysis and rami of the pubis. The measurement of the widest part of the conjugate diameter in the two lateral divisions did not exceed an inch and a-half. The anterior division was not more than half an inch in its widest part, as it would scarcely admit one finger edgeways. In the transverse diameter of the brim three fingers could just be placed parallel with each other. The external genitals were free from tumefaction, and the vaginal lining was moist, and of a natural temperature. She had not felt the movement of the infant since the morning, but the stethoscope satisfactorily elicited the pulsations of its heart.

Operation. — Dr Radford raised the fundus uteri, and Mr Cluley divided the abdominal integuments on the left side of the umbilicus to about six inches in extent, from which very little blood was lost. An opening was now made into the uterus by a scalpel, which was further extended upwards and downwards by the probe-pointed bistoury. At this stage some little bleeding took place from the divided sinuses; and there was also a considerable discharge of liquor amnii. Dr Radford introduced one hand into the uterus, over the infant's hip, and fixed the fingers over the flexed thigh in the groin, and having placed the other hand on the opposite side of its breach, extracted it vigorously alive. During this manœuvre the uterus strongly and regularly contracted. The funis was now tied and divided, the placenta, which was fixed on the right latero-posterior surface of the uterus, being afterwards readily detached. There was some blood discharged, but not more than frequently happens after ordinary or natural labour. Several convolutions of intestines, with a portion of omentum, now protruded, which had up to this time been supported and effectually restrained under the abdominal parietes, but they were readily returned. The integuments were brought into proximity, and held together for a short time by a hand placed on each side; and, as there was no further discharge of blood, ligatures were inserted at an inch distance from each other. Mr Cluley used a long needle, with a scalpel-like handle, for this purpose, which admirably answered. Straps of adhesive plaster were laid across the wound, and on each side a compress of lint was placed, and over all a bandage, just tight enough to give a firm support.

Up to June 7th nothing occurred in the character of the symptoms to require particular comment. She continued progressively to improve. The wound gradually filled up by granulation.

Dr Radford, who communicated the particulars of this interesting case at the anniversary meeting of the Provincial Medical and Surgical Association, remarks, the patient is thirty-one years of age, and has been married nearly nine. During this period she has had five children. The labours of the first four were natural and quick: the last of this number happened three years ago, and was so rapid that the infant was born before the obstetrician arrived. After the birth of the second, she was rather more delicate, and suffered a little from indigestion; and about five or six years since first complained of slight rheumatic pains about her hips. Two years since she was confined to bed for a short time by pains about the pelvis; but she gradually recovered, and afterwards was able to walk about tolerably well. Her general health remained the same up to the period of her last pregnancy. She was now observed to limp a little when she walked, and to be less in height.

During her gestation her progression was more difficult, and her gait more waddling. She also complained more of pelvic pains; and the diminution in her stature now evidently increased. Mollities ossium, the disease under which she

suffered, usually commences during pregnancy, and generally becomes suspended in the interval, returning in an aggravated form in each successive pregnancy, until its ravages have completely destroyed the form of the pelvis. In this case, however, it did not exactly pursue this course. There is no doubt there existed a strong predisposition to the disease—most likely hereditary; and probably the disease began at the latter part of the second pregnancy, but evidently no great, if any, mischief was done to the pelvis at this time, or for a long time after this period, as the third and fourth labours were so rapidly and easily terminated. The rapidity of its progress is remarkable; for there is little doubt that the great degree of distortion took place immediately before and during the last pregnancy. Sometimes in this disease the bones are so soft that they yield, when the hand is introduced to make an examination. This happened here, as Mr Cluley thought he felt a giving way of the bones when he examined the pelvis.

Dr Radford properly remarks further, that the aid derived from auscultation to detect whether the child be dead or living is most valuable, but not more so than the evidence it furnishes us as to the location of the placenta. It is of the utmost importance to avoid, if possible, cutting into this organ; for if it should happen that it is fixed on the portion of the uterus incised, there is some risk of hemorrhage, and it may lead to irregular contraction of the uterus, and so become an obstacle to the speedy and safe extraction of the infant.—*Prov. Med. and Sur. Journal*, Aug. 22, 1849.

325.—*Case of Cæsarean Operation, under the influence of Chloroform.* By Mr Campbell. — Mrs Rogers, aged forty years, a poor woman, residing in a mountainous district, about six miles from Lisburn, county Antrim, Ireland, had enjoyed good health from infancy till about ten years ago, when, shortly after the birth of her second child, now alive, and deformed with rickets, she began to complain of pains in her joints of a rheumatic character. Since that period she has given birth to three children, besides the one of which she was delivered by this operation. Her first four labours were not attended by anything worthy of interest; the fifth child, about four years since, although very small, was extracted still-born with extreme difficulty, owing to the contraction of the pelvis, consequent on mollities ossium, she being at that time totally unable to move or leave her bed. Her health, however, during the last year, having improved, she again became pregnant, and was seized with labour pains on Wednesday the 16th May, and visited by Mr C. on the morning of the 18th.

An examination per vaginam revealed an amount of pelvic deformity and contraction that induced him to consider delivery with the crotchet impracticable.

The pains continuing very violent, the performance of embryulcia was attempted, but failed, the pelvic contraction being such as to prevent even a finger and the perforator passing to the head together; the Cæsarean section, therefore, appeared the only course to pursue, with a view to the preservation of the life of either mother or child.

Chloroform was administered, and complete insensibility to pain being in a few seconds produced, Mr C. commenced his incision two or three lines to the left side and an inch above the umbilicus, carrying it down to within an inch of the pubes, dividing merely the integuments; then, opening the peritoneum at the upper part of the wound, from which a considerable quantity of serum escaped, and using the forefinger of his left hand as a director, with a probe-pointed bistoury he laid open the abdominal cavity, and exposed the uterus, into which he cautiously introduced a scalpel, and with the bistoury resting on his finger, as in the former incision, he divided the uterus to the extent of the external wound, and without difficulty extracted a healthy female child (weighing eight pounds), and immediately the placenta and membranes.

The uterus contracted quickly, and a knuckle of intestine, with some omentum, likely to protrude, were guarded until the edges of the external wound were brought together by a few interrupted sutures; a piece of wet lint was laid over the wound, with a longitudinal pad of calico on either side of it, and all secured by a roller firmly applied round the body, extending from the breasts to the trochanters.

The operation, which (exclusive of the bandaging) did not occupy more than five minutes, was not in the slightest degree felt by the patient, who, on the conclusion of it, in the warmest manner, expressed herself to have been without pain, and comfortable, though fully conscious that her delivery was being accomplished in so unusual a manner. Her pulse was 60, and good; vomiting, however, occurred about twenty minutes after, and for half an hour proved troublesome.

19th.—Has passed a good night, and had some sleep; lochial discharge, per vaginam, copious; urine voided freely; occasionally feels the uterus, which she describes as "a lump moving through the belly," attended with some pain, and an increase of the lochial discharge. Child applied to the breast; skin natural; pulse, 100. To have one grain of opium, and half a grain of calomel, every four hours.

20th.—The earlier part of the night has been easy, but now complains of sickness, and a tendency to faint; skin moderately warm; pulse 100; urine passed freely; lochial discharge abundant; occasional pain in the abdomen. Some milk in breasts; tongue moist and clean; bowels not moved. To have a simple enema, and continue the pills every six hours.

21st, 8 A.M.—Sickness and vomiting distressing; skin warm; pulse 120, and wiry; occasional pain in the abdomen, but no tenderness on pressure; flatus passed per anum, but no fæces, the enema having been returned as it was given. Considerable tympanitis; wound dressed, but not discharging; lochia abundant. To have ten grains of calomel in dry sugar immediately, with one grain of calomel, and one grain of opium, every three hours, and mercurial ointment rubbed into the arm-pits every three hours.

6 P.M.—Pulse, 150; abdomen slightly pained, and tympanitis increasing; some serous discharge from the wound; has vomited but once since morning. To continue the pills and mercurial ointment.

22d, 6 P.M. — Countenance anxious; some vomiting, extreme sickness, occasional hiccough; bowels not moved; no abdominal tenderness; tympanitis increasing; discharge from the wound continuing.

23d.—Has had an uneasy night; sickness and vomiting obstinate; abdomen greatly distended, but without pain; bowels still unmoved; features sharp and pinched; pulse, 140; discharge from wound copious; lochia ceased.

24th.—Sickness and vomiting having ceased, she sank about one P.M., without expressing any signs of pain, and retaining her senses till the last, having survived the operation seven days.

The post-mortem examination, made twenty-four hours after, exhibited very extensive peritonitis, with some serous effusion into the peritoneal sac; the uterus was about twice the size of the closed hand, the wound in which did not appear much more than two inches in length.

The pelvis was extremely distorted and contracted, the rami of the pubes being approximated to within half an inch of each other, as were the rami of the ischia. The antero-posterior measurement of the brim was but an inch; the transverse, two inches and a quarter.—*London Med. Gaz.*, June 29, 1849.

326.—*Cæsarean Operation successful, both to Mother and Child.*—An Italian journal, the *Gazetta Medica Lombarda*, reports the following case:—A female, aged thirty-five, had for many years been subject to rheumatic pains in the pelvic and lower extremities. Her first child was extracted dead. During her last pregnancy she had a return of her arthralgia, during the persistence of which her body became so curved that she could not raise herself upright. Labour commenced on the morning of the 20th of June, and the midwife having recognised an arm presentation as well as a distorted pelvis, sought the aid of M. Custodi. By him it was soon ascertained that the transverse diameter of the brim was only two inches. Under the circumstances, in accordance with the views of the Italian school, the Cæsarean operation was at once decided upon, and performed six hours after the commencement of labour. The only bad symptom which followed was some degree of meteorism, which was combated successfully by the external and internal use of ice; and on the ninth day the abdominal incision had perfectly closed.

327.—*New Operation for the Treatment of Vesico Vaginal Fistula.*—M. Jobert, surgeon to the Hospital St Louis, has introduced an operation for this hitherto intractable accident, and which he designates "Autoplastie par glissement," and by which he has succeeded in effecting many perfect cures. The following parts or stages constitute this new operative proceeding:—

1. The patient is placed on her back, the pelvis approached to the edge of the bed or table, and the thighs flexed as in the operation for lithotomy. The walls of the vagina are to be separated by means of a univalve speculum and curved levers contrived for the purpose. The cervix uteri is then to be laid hold of at the point of insertion of the vagina, by a pair of hooked forceps, furnished with a rack at their handles, and being drawn down to the vulvæ, is maintained in that position during the entire operation.

2. A semicircular incision detaches the insertion of the vagina from the cervix uteri. The two lips of this incision instantly separate, leaving a bleeding sur-

face about one inch in width. The vagina, with a gliding movement, slides spontaneously forward, whereby the lips of the vesico-vaginal fistula are approximated, and the loss of substance repaired.

3. The edges of the fistula are then to be paired with a bistoury or scissors. The mucous membrane only is to be removed, to the extent of about one centimetre, equal to one-third of an inch. It is important to remove only the mucous membrane, in order that further loss of substance be not incurred; and it is equally important to secure a sufficiently extensive bleeding surface for subsequent union.

4. The cut edges are next to be brought together by interrupted sutures, each at the distance of about one-third of an inch, leaving so much of the ligatures as shall facilitate their removal at the proper time.

5. If any gaping of the edges of the fistula should remain, it is also important to remove this by superficial incisions on either side of the fistula.

6. Hemorrhage is to be restrained by a plug of amadou introduced into the vagina, and which is to be removed in a day or two, perhaps on the following day.

7. An elastic catheter is to be introduced and retained in the bladder. The patient must maintain the recumbent posture, with the legs raised on cushions, until union has taken place.—*Bulletin de Thérapeutique*, Fevrier, 1849.

328.—*Abortion produced by Metastasis in Cynanche Parotidœa.* By T. Salter, F.R.C.S.—Mr Salter cites a case of a lady having aborted at the third month of her pregnancy, on the sudden remission of cynanche parotidœa, and which he thinks was the result of metastasis.

He remarks that "the chief point of interest in the case is the question, How far the specific influence of the cynanche parotidœa might have been operative in causing abortion? It must be granted that the mere febrile excitement of any severe inflammatory disease is enough, in persons so disposed, to excite abortion; but I much question if this case can be so accounted for, and that the abortion was produced simply by the febrile disturbance of the disease, independent of its specific action. Maintaining, therefore, the idea that the accident was the result of metastasis, it appears to me interesting physiologically, as it would tend to show that the ovum, while in the uterus, maintains the same relations to the rest of the organism, and is subject to the same influence, as when in the ovarium; and practically it would have an important influence on prognosis, which I should think, as far as the ovum is concerned, very unfavourable in such cases."

Mr S. says that "we have abundant experience to show, through the influence of the disease, the relation subsisting between the parotid glands, whilst affected with this specific inflammation, and the testicles in the male; and also between the same organs and the breasts in the female; and from the known sympathetic association of the mammary glands with the ovaria and uterus, it may readily be supposed that in cynanche parotidœa an irritation may be communicated to the uterine system leading to results incompatible with the continuance of the process of utero-gestation. And, on the other hand, it is possible, in this chain of causation, in cases where the female breasts are affected in cynanche parotidœa, that the influence on them may be secondary to some primary disturbance of the ovaries, though this may not be disclosed by any palpable symptoms referred to the latter organs themselves. The analogy between the testes and the ovaries, and the sympathy of the breasts with the ovaries, are in favour of this hypothesis."—*London Med. Gaz.*, July 20, 1849.

329.—*Neuralgia of the Cervix Uteri.*—According to Malgaigne this is a frequent affection. It is combined with leucorrhœa, and with congestion of the os and cervix. The characteristic symptom is the presence of a painful spot, generally near the anterior lip. It is also accompanied by neuralgic pains in the abdomen, loins, and epigastrium. His treatment consists of an incision into the painful spot, by which he divides the affected nerve. He states that he has met with great success, and the hemorrhage has in all cases been trifling.—*Prov. Med. and Sur. Journal*, Aug. 22, 1849.

330.—*A probable Sign of Masturbation in Females.*—The sad consequences of solitary vice, though well recognised in the male, frequently pass unobserved in the female, in whom the habit is probably equally, if not more common. The general ignorance on this subject arises from the difficulty in obtaining those disclosures which are made by the other sex with less reluctance. M. Durr states that he has for a long time noticed that girls addicted to this vice are subject to warts on the index and medius fingers, the instruments

of these disgusting practices. M. Vaudge has also detected the habit by this sign in two cases of extreme emaciation and debility in females, which he could not otherwise account for.—*Revue Med.-Chirurgicale*, Avril 1849.

V.—FORENSIC MEDICINE AND TOXICOLOGY.

331.—*American Jurisprudence.—Damages recovered from an Insane Person for killing a Man.*—On Sunday afternoon, May 28, 1848, a stranger was noticed in Albany, apparently highly excited, brandishing a pistol and bowie knife. His conduct attracted the attention of some men and boys sitting in the park, who followed him through several streets. He told them not to come near him, as he was armed; but they continued to pursue him, and hurled stones at him, until he turned and fired a pistol at the apparent leader, John C. Mull, who was nearest to him. The discharge slightly wounded Mull, who immediately rushed upon the armed man, and in the scuffle that ensued, was stabbed by him in the side, so that he died a few days afterwards. The stranger proved to be Thomas Kelly from Du Buque, Iowa, the owner of a valuable mine in that region, and who had about his person nearly ten thousand dollars. He was examined, and pronounced a monomaniac, and has since then been in the State Lunatic Asylum, at Utica. His insane delusion is, that persons are pursuing him to rob him, and he so regarded those who followed him in Albany. On other subjects he seems rational. An action of damages was brought against the deranged man by the executor of the estate of Mull. Mull, at the time of his death, was a young man, a mechanic, earning, when he worked, a dollar and a quarter a day. He left a wife and an infant child. The action was brought under the following law, passed December 13, 1847, only a few months previous to the death of Mull:—"The People of the State of New York, represented in Senate and Assembly, do enact as follows:—1. Whenever the death of a person shall be caused by wrongful act, neglect, or default, and the act, neglect, or default, is such as would (if death had not ensued) have entitled the party injured to maintain an action and recover damages in respect thereof, then, and in every such case, the person who, or the corporation which, would have been liable if death had not ensued, shall be liable to an action for damages, notwithstanding the death of the person injured, and although the death shall have been caused under such circumstances as amount in law to felony. 2. Every such action shall be brought by and in the names of the personal representatives of such deceased person, and the amount recovered in every such action shall be for the exclusive benefit of the widow and next of kin of such deceased person, and shall be distributed to such widow and next of kin in the proportions provided by law in relation to the distribution of personal property, left by persons dying intestate; and in every such action the jury may give such damages as they shall deem fair and just, with reference to the pecuniary injury resulting from such death to the wife and next of kin of such deceased person: provided, that every such action shall be commenced within two years after the death of such deceased person." The case was brought on in the Circuit Court at Albany, the 6th of June last, Judge Parker presiding, and was ably argued by J. K. Porter for the defendant, and H. G. Wheaton for the plaintiff. Judge Parker charged—"That if the conduct of the defendant (he being a madman) was such, when at large, as to endanger the safety of persons about him in the streets, it was the right of Mull and others to secure him, and that they were authorised to use as much force as was necessary for that purpose. And that, if in so doing by proper means, the defendant inflicted the wounds that caused Mull's death, the defendant was *civilly* liable for the damage caused, though he could not be responsible *criminally* for the act, in consequence of his insanity. This law had long been settled, and was conceded by the defendant's counsel. It was upon the ground that the loss sustained ought to fall upon the persons causing it. If a lunatic took the money or property of another person he was liable to make the injury good by way of damages in a civil suit. The rule was the same, whether the injury was to the person or property of another. But when such a suit was brought to obtain indemnity, nothing could be added to the damages by way of fine or punishment, for the lunatic was incapable of intending wrong. He was not responsible for any wrong intention, and could not be punished under indict-

ment or otherwise, for any injury he might commit. And if the jury thought the act complained of was committed under such circumstances as to make the defendant liable, they would give by way of damages only the actual loss sustained." The jury returned a verdict of two thousand eight hundred dollars. We do not know but this verdict was legal and right, but we have doubts. The law says, "Whenever the death of a person shall be caused by wrongful act," &c. Can an insane man commit a *wrongful* act in the sense that the law contemplates? Besides, insane persons, when unmolested, do not frequently commit heinous acts; but such persons are easily exasperated, frightened, and rendered furious. No doubt, in this case, Kelly thought he was defending himself against a mob, intent on killing and robbing him. In such cases we think the inquiry should be *very strict*, if those who thus suddenly pursue a deranged person through the streets are altogether in the right, and are acting with due deliberation, caution, and from proper motives. At all events, it is to be regretted that one of the first decisions under this new law should have the effect of taking the property from an insane person, who, labouring under the direst affliction of Divine Providence, rendering him incapable of intentional wrong, committed an act for which he is not responsible criminally. Such decisions must, in some cases, have the effect to strip the unfortunate wife and children of the afflicted maniac of all they possess, and the maniac himself of the means of restoration, in order to pay—for what? that which has no calculable value—which cannot be estimated by dollars and cents. What guidance had the jury to enable them to determine that the damage in this case was two thousand eight hundred dollars? Man, in this region, has no marketable value; and, as Jeremy Taylor says, "death meets us everywhere, and is procured by every instrument, and in all chances, and enters in at many doors." How can we calculate in dollars and cents the value of that which is so uncertain as life?—*Amer. Jour. of Insanity*, and *Dublin Med. Press*, September 19, 1849.

332.—*Illegal Hydropathic Practice.—Alleged Death from the Imprudent Application of Cold Water.*— On Tuesday, the 19th of June last, an inquest was held on the body of Dinah Toothill, at the Angel Inn, Keighley, before Thomas Brown, Esq., Coroner.

[In the face of the most convincing evidence of murderous treatment, juries continue to outrage the commonsense of mankind by returning the hacknied verdict of "*Died by the visitation of God.*" It would appear that the most powerful agents may be applied by the most illiterate of quacks, so as to occasion death, and yet the proper charge of manslaughter must, as in this case, be permitted to fall to the ground. The case of poor Dinah Toothill strikingly illustrates the insufficiency of legal enactments for the protection of human life, against the lethal weapons of quackery, and affords another instance of the danger of abusing a naturally innocent agent. It was abundantly proved that a gross and fatal outrage on female decency was perpetrated by a hydropathic adventurer, he having for days *personally subjected his patient, while menstruating*, to the cold water "*cure*," (?) until death removed her beyond the revolting scene.]

Evidence being adduced, in summing-up, the Coroner said that, in the whole course of his experience, he had never met with a more flagrant case than the one under consideration. He could not imagine any proceeding more repulsive to the feelings and more insulting to the delicacy of a woman than that of being taken out of bed and stripped naked by a man; and this being repeated five times a day, made the circumstance doubly gross. He then instituted a comparison between the case of the deceased and that of Miss Cathèrine Cashen. The latter was a patient of the notorious St John Long, who, by friction and the use of stimulating liquids to the back induced inflammation, terminating in sloughing, exfoliation of the spinal bones, and subsequent death. The friends of the lady brought an action against the quack, which was tried twice. In both trials he was found guilty, the judges deciding that "an illegal practitioner exposing the person of a female for the purpose of applying his remedies was guilty of a common assault; and if death followed upon the administration of the remedies he was guilty of manslaughter." He (the Coroner) in conclusion mentioned these facts, as they pointed out the law on the subject in a manner not to be misunderstood. It was for the jury to consider the whole of the evidence, and frame their verdict accordingly.

After a few minutes' conference the jury returned a verdict of "Died by the visitation of God."—*Dublin Med. Press*, September 19, 1849.

333.—*Sudden Death from Mental Emotion.*—A few days ago, a boy, attempting to procure some water out of the canal

which passes at the back of Georgiana-street, Camden Town, was reaching from its bank with a can, when he fell into the water, sank, and did not again rise to the surface. Drags were sent for, and in about ten minutes the body of the boy was drawn up. Every suitable means for the boy's restoration were employed by Mr Noyce, but without avail, for life was already extinct. While the drags were being procured, a labouring man, who had seen the boy fall into the water, volunteered to plunge in after him, but whilst in the act of undressing for that purpose, he was seized with symptoms of cerebral congestion, terminating in paralysis, and being taken to the adjoining workhouse, died there in about three hours afterwards. On examination of the poor fellow's head, apoplectic extravasation was found.

This case is of some medico-legal importance, from the fact that, if the above consequences of intense mental emotion had not resulted until after this man had plunged into the water, the real cause of his death would have probably remained unknown. It would, perhaps, have been attributed at the inquest to drowning.—*Med. Gaz.*

334.—*A New Disinfecting Fluid.*—The Sanitary Committee, or Board of Health, recently appointed in Paris, has just made some interesting experiments, which are worthy of record.

The state of the water-closets and other *lieux d'aisances* in this capital of the civilised world is deplorable. Although Paris had made considerable progress, within the last ten years, in the improvement of these most necessary sanctuaries, their condition still remains barbarous, particularly in the numerous schools devoted to the reception of the children of the poorer classes. The charity schools of the Rue Brise Miche, and two other establishments of the same kind—regular pest houses—were handed over to MM. Audiat and Labelonye for the purpose of making some experiments with a new disinfecting liquor—a solution of nitrate of lead. The cess-pools alluded to were so infected, that it was impossible to approach them without being almost suffocated, while the ammoniacal vapours penetrated through all the class-rooms, rendering their habitation intolerable. A simple washing of the infected localities with the disinfecting fluid, and a few aspersions, completely removed every trace of disagreeable odour. The experiments were continued for fifteen days, and the Board ascertained that no devolopment of obnoxious smell occurred before the third day, when it was easily suppressed by a fresh application of the fluid. The Board of Health announces its conviction, from these and other experiments, that we now possess a means of completely disinfecting all *lieux d'aisances*, and it has formally invited the Corporation of Paris to take immediate steps for applying this principle to the purification of the numerous charity schools and asylums throughout the city. The nitrate of lead possesses a much greater disinfecting power than the chloride of lime. It might, perhaps, be well to compare its powers with those of the chloride of zinc.—*Med. Times*, July 14, 1849.

335.—*Poisoning by Daphne Mezereon* By Dr Schwabbs of Königsberg.—Cases of poisoning by the berries of mezereon are by no means frequent, notwithstanding their resemblance to the common red currant, and the frequency with which the plant is cultivated as an ornamental shrub in gardens. Experiments on animals have proved that these berries contain a very active poison. Mitscherlich killed a dog with twenty grains of the powder, and Linnæus saw a wolf killed by six of the berries. For these reasons, Dr S. deems the following case of sufficient interest for publication:—Two children, one a boy of four years of age, the other a girl two years old, rambled unnoticed into a neighbour's garden. On returning home, the boy complained of a sense of burning in the mouth, followed by nausea. He, of his own accord, attributed his illness to his having eaten some red berries which he had found on a shrub in the garden. Medical advice was immediately procured. Before Dr Schwebes arrived, milk had been given to him, and he had vomited freely, the vomited matters containing a quantity of the berries of the Daphne mezereon, some masticated and some entire. The child continued to complain of dryness and heat in the mouth, and of burning pain in the stomach. A reddish mucus was voided from the throat and mouth, but no abrasion or blister could be discovered on the mucous membrane. The inclination to vomit continued, but nothing was ejected. The pulse was regular.

The girl, who, according to her brother's statement, had eaten the berries as well as himself, was playing about the room, without manifesting any signs of indisposition. An emetic was given to each of the children; the boy vomited the remainder of the milk he had drunk, mixed with more berries. The girl

vomited after a longer interval, and ejected eight entire berries. On visiting the children in an hour afterwards, Dr Schwebes found both in a state of complete narcotism, with coma; there were convulsive movements of the eyes and upper extremities occurring at short intervals; the pupils were contracted, and scarcely sensible to the stimulus of light. It thus appears that the poisonous action of mezereon depends upon irritation of the brain and upper part of the spinal cord. The convulsions must be attributed to irritation of the intestinal canal through the sympathetic nerve, as in helminthias. By warm baths, cold affusion to the head, sinapisms to the extremities, and other appropriate treatment, the coma and convulsions disappeared, and on the following day both children had perfectly recovered. By way of experiment, Dr Schwebes gave six berries off the same shrub to a rabbit, which masticated and swallowed them; three hours afterwards the animal ate food that was put before it, and appeared none the worse for the poison which it had swallowed.—*Casper's Wochenschrift*, and *Med. Gaz.*

336.—*A New Method of detecting Arsenic in the Viscera, and in Organic Substances.*—M. J. L. Lassaigne boils the substances suspected to contain arsenic in a mixture of sulphuric and nitric acids, slightly diluted with water; the resulting liquid contains all the arsenic present, and has not the usual viscosity of the fluid matters to be tested. Solid matters may be treated in the following manner:—Having been divided into small pieces, they are boiled in concentrated sulphuric acid, until incipient carbonisation takes place; then, when cool, concentrated nitric acid in excess is added to the carbonised mass, and the mixture is boiled until the nitric acid is entirely decomposed. The residue is diluted with from five to six times its volume of distilled water; it is then filtered, and Marsh's test applied.

A weight of sulphuric and nitric acids, equal to the weight of the substances requiring analysis, is considered by M. Lassaigne to be the suitable proportion. This method M. Lassaigne has found to be completely successful in separating arsenic from even the smallest quantities of organic matter.—*Journal de Chimie Médicale.*

The process here described is objectionable, because it is incompatible with the employment of Reinsch's excellent test.—*Med. Gaz.*, May 4, 1849.

VI.—MATERIA MEDICA AND THERAPEUTICS.

337.—*Cod Liver Oil.*—The earliest trials of this remedy made on a large scale were those instituted at the Brompton Hospital; where it has now been given in many hundred cases. The results of all these are not given, but its effects are shown in 542 cases.

Of these 542 cases, 293 were in the first stage of the disease, and 249 in the second and third, or those stages subsequent to softening. Of those in the first stage, 190 were males, and 103 were females; 72 per cent. of the males, and 62 per cent. of the females, had their symptoms materially improved; in nearly 18 per cent. of the males, and in 28 per cent. of the females, the disease was arrested (the term *arrest* implies that all or nearly all the symptoms of the disease had disappeared, the patients felt themselves well and able to pursue their ordinary occupations); in 10 per cent. of the males, and in nearly 10 per cent. of the females, the disease progressed unchecked. Of the 249 patients in the second stage of the disease, 139 were males, and 110 females; in 53 per cent. of the males, the symptoms were materially improved, and in nearly 61 per cent. of the females. In a little more than 14 per cent. of the males, and in nearly 14 per cent. of the females, the disease was arrested. In a little more than 32 per cent. of the males, and in 25½ per cent. of the females, the disease was not arrested. Viewing these results collectively, we find in about 63 per cent., the symptoms improved; in 18 per cent., the disease was arrested; and in 19 per cent., it went on unchecked. When it is recollected that, of the whole number treated at this Hospital, the disease was arrested in only 5 per cent., the value of this remedy, under the use of which the disease appears to have been arrested in 18 per cent. of the cases, must be considered very great.

Different qualities of oil were tried, without exhibiting any marked difference in their remedial effects; but the offensiveness of some of the darker kinds rendered their general use impracticable. The oil now used is straw-coloured, transparent, and free from offensive smell. Patients in general take it without repugnance. The

dose at first is 1 drachm three times a-day for an adult; but it is gradually increased in some few cases to 1½ oz. for a dose. It is usually administered in camphor-water, any aromatic water, bitter infusions, milk, or any other agreeable fluid. When there is great irritability of stomach, it has been given in mucilage of gum with a few drops of hydrocyanic acid. In cases where there existed great anæmia and debility, and in those where the effect of the oil seemed slight, preparations of quinine and iron, especially the iodide, have been conjoined with advantage. It has appeared advantageous to intermit its use for a few days when nausea and feverishness, from whatever cause produced, are present. In certain cases the use of the oil has been continued during the existence of slight hæmoptysis, without producing any injurious results.

Other animal oils (not derived from the liver) and vegetable oils, were tried with a view of ascertaining how far their operation resembled that of cod liver oil. The experiments hitherto made have not shown them to possess the same powers; but they have not been as yet sufficiently often repeated to warrant decided conclusions.

One of the most striking effects of the use of cod liver oil is an increase in the patient's weight; with a view of showing the frequency with which this occurs, the gain or loss of weight was ascertained in 219 cases of consumption treated with the oil.

Taking both stages of the disease, and the sexes collectively, a gain of weight occurred in 70 per cent., a loss of weight in only 21 per cent., and in about 8½ per cent. the weight remained stationary. The amount of the increase varied, being in some patients little than more than one or two pounds during several months; whilst, in many, the average increase was from a pound to two pounds weekly during several weeks. Some very remarkable instances of great increase of weight presented themselves,—thus, in one instance, 41 pounds were gained in 16 weeks; in another, 19½ pounds were gained in 28 days, and 10 pounds in the succeeding 10 days; in another case, 29 pounds were added to the patient's weight in 31 days. It must be observed, that an amelioration of the symptoms did not invariably follow an increase of weight, though the exceptions were rare. An aggravation of the symptoms and a diminution of weight were almost invariable coincidences. In a few cases the symptoms improved, though the weight remained stationary, or even became slightly diminished. In other cases, where the amelioration was still more considerable, and the progress of the disease appeared to have been stayed, relapse occurred, and was followed by a rapid progress to a fatal issue. That such cases do occur requires to be remembered, in order to restrain too sanguine expectations, and to prevent the remedy from falling into the discredit which disappointment after an unlimited confidence may induce. On the other hand, without entering into a description of the successive steps of amelioration experienced by patients, it will suffice to say, that many of the cases included in the 18 per cent., in whom the disease is marked arrested, felt themselves as well as they had been before the attack of the disease.

From these facts, no other conclusion can be drawn than that cod liver oil possesses the property of controlling the symptoms of pulmonary consumption, if not of arresting the disease, to a greater extent than any other agent hitherto tried. —*The First Medical Report of the Hospital for Consumption and Diseases of the Chest, by the Physicians of the Institution. London*, 1849.

338.—*Iodine in the Treatment of Snake-Bites.* Dr Whitmire states (*North-Western Med. and Surg. Jour.*, Jan. 1849), that he has used the tincture of iodine in cases of the bites of the rattlesnake, viper, and copper-head, in both man and beast, with the effect of putting an entire stop to the swelling and pain of the bitten part, in from twelve to sixteen hours. He paints the bitten part over the whole swelling with three or four coats of the tincture twice daily, and should the swelling extend, which it almost always does after the first application, if made soon after the infliction of the wound, he repeats the application. The third application puts a stop to the extension of the swelling, and three or four more will generally restore the limb to its natural state, except, perhaps, sensibility to the touch, and soreness of the muscles.—*American Journal of the Medical Sciences.*

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

DECEMBER, 1849.

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I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

339.—*Congenital Closure of the Rectum, with which the Infant lived five weeks.* By Mr GEORGE, of Kensington.—The child, a male, was born on the 10th of May. On the 12th, as no meconium had appeared, an enema was attempted to be thrown up, but returned. On then making an examination per anum, the finger could not be passed farther than an inch, where the rectum appeared to terminate in a pouch, resembling the finger of a glove. No hardness or protrusion could be felt beyond this. The abdomen had increased in hardness, and was somewhat distended. The urine was voided freely, and was quite natural.

It was explained to the parents, that the only hope of relief was the chance of the gut becoming distended, and felt presenting within the rectum, when an operation might be successful.

Up to June 12th, the infant continued free from pain, and lived in perfect comfort. Sir B. Brodie saw the case with Mr George, and agreed that nothing could be done, as no protruding bowel could be felt. The infant now became restless, the abdomen became much distended, the feet œdematous, and the urine passed in drops only; and death took place on the 14th, exactly five weeks after birth.

The following is Mr George's account of the post-mortem appearances:—

"The chest and superior extremities were emaciated, the abdomen much distended, the legs œdematous, especially about the ankles.

"On opening the cavity of the peritoneum, a considerable quantity of serum escaped; the great intestines were much distended; the omentum greatly attenuated, covering only the transverse colon; the bladder very prominent, and greatly distended with urine. On examining the alimentary canal, the stomach was found to be very small, about the size of one of the kidneys. The duodenum and jejunum were natural, but the ileum gradually increased in diameter towards its termination, with patches of inflammation throughout its extent. The colon was much distended, and contained a great quantity of yellow feculent matter, which was deposited in masses, having large interspaces of intestine blown out with air, but nothing like meconium was present. Towards the sigmoid flexure the fæces increased in quantity, and the gut there ended in a blind pouch, exactly opposite the base of the sacrum, occupying the greater part of the false pelvis behind the bladder. This pouch was held in place by a continuation of the meso-colon, which was attached to the sacrum, and from thence the peritoneum passed down into the true pelvis, forming a fold similar to

the meso-rectum attached to the anterior surface of the sacrum; but there being no rectum in this situation, it was reflected from the fore part of the sacrum on to the posterior surface of the bladder; and in this fold, or its reflection, no trace of gut or ligament could be found communicating with the pouch above, or rectum below. The only portion of rectum existing, was about three-quarters of an inch in length from the anus, and terminated in a cœcal puckered extremity, which was attached to the under surface of the prostate gland by some small fibrous bands and cellular tissue. The kidneys were large and lobulated; the ureters, in the upper two-thirds of their course, were distended with fluid to the size of the small intestines of a healthy infant, and were almost transparent; but in the lower one-third, they had a natural appearance. The remaining viscera were healthy."—*Lond. Med. Gaz.*, August 17, 1849.

340.—*Influence of the Mental Impressions on the Fœtus in Utero.*—After relating the case of imperforate anus given in surgical department of this Retrospect, Dr Hooper continues:—"I have no doubt that many cases of malformation are primordial; but facts prove that they are frequently the consequences of strong impressions upon the mind of the mother during gestation; and it is perhaps well that this opinion should prevail, in order to protect pregnant women from all hazardous and disagreeable occupations, and to secure for them more tenderness and indulgence than could be allowed in the common routine of life. The mother of my little patient, who is a very intelligent lady, suffered from *Ischuria vesicalis* at an early period of gestation. It caused her much distress, and no little mental anxiety. She endeavoured to glean information upon the subject from an encyclopædia, and among the causes of this disease in infants, this malformation was mentioned, and, as may be supposed in a nervous lady, was likely to excite fear lest her offspring should labour under this calamity. She reasoned with herself, but could not shake off the impression.

"Some years since, a lady in this neighbourhood, after giving birth to a fine child, asked me to look at the upper lip. On doing so, it presented the appearance of a well-united hare-lip; the marks of the pins were evident. About the second month of pregnancy she saw a child who had been successfully operated upon for hare-lip.

"A lady, a relative of mine, while pregnant with a boy, pinched her right thumb between the door and door-post; the accident caused her much pain. She was so firmly convinced her child's right thumb would be marked, that at the birth she desired the nurse to look at it, and this member appeared as if its lateral growth had been impeded by a vice, and had more the character of a finger than a thumb. He is now a man, and the deformity continues.

"Dr Wood, my predecessor, attended a lady in her confinement, who had frequently, anterior to the birth of her child, affirmed, 'that it would be marked with blood on the hand.' About the third month of gestation, she was much frightened by a servant entering the kitchen with her hands reeking with the blood of a goose just killed. The child she bore was a girl, who is now the mother of a large family. One hand has livid spots, and, when warm, has exactly the appearance of blood having been sprinkled over it. None of her children have this mark. About eight years since, a carpenter's wife, of the name of Brand, was walking from Throcking to Chipping (two villages in this neighbourhood) during the early period of gestation; as she was passing a plantation of firs, a wild duck flew out; its sudden appearance, together with the peculiar noise those birds make, alarmed her exceedingly; she saw the bird distinctly, and stood in an attitude of despair, with her hand clasped for some minutes, before she could proceed. Until her accouchement she continued to labour under the effects of this fright; indeed, she was an invalid during the whole period, and never without the impression that her child would have some deformity. Two surgeons were with her when she gave birth to a boy; she solicited them immediately to examine it; the fingers and toes were united by skin, and the nails had more the appearance of claws. When I first saw him he was advanced in life, and was clearly web-footed and web-fingered; but, to give more freedom to the hand, the thumb and index finger had been partially separated by a surgeon when he was a boy. He had one son with the same malformation, whom I also saw. There can be no doubt of the aboriginality of the latter."—*Med. Times*, Aug. 18, 1849.

In the "Dublin Medical Press" for August 22, the following instances are related:—

Mrs B., when six months advanced in pregnancy, was present when Mrs A. was delivered of a male child, with a severe hare-lip and cleft palate towards the left of the mesial line. She saw the child on two or three subsequent occasions, but

experienced no apprehension. Three months afterwards she gave birth to a female child, quite perfect, but from the septum of the nose extending downwards to the left of the mesial line, and through the thickness of the labial convexity, the outline of a hare-lip was perfectly distinct. The hard and soft palates were perfect and natural.

A lady, then about six months pregnant, received from her husband, in an attack of night-mare, a violent blow on the right eyebrow, producing extensive ecchymosis. She frequently alluded to the circumstance, expressing her fears that the child would be marked; and, accordingly, it was born at the full time, with a tumour on the superciliary ridge, afterwards requiring a slight operation for its removal.

To those who believe that there is anything in such cases beyond mere coincidence, we may recommend a perusal of the article "Generation," by Dr Allen Thomson, in the "Cyclopædia of Anatomy and Physiology."

II.—PRACTICE OF SURGERY.

341.—*Case of Imperforate Anus—Successful Operation on the third day after Birth.* By JOHN HOOPER, M.D.—The wife of a clergyman was delivered, on June 16th, 1849, of a fine boy four weeks before the full time of utero-gestation. On the 18th, the bowels not having acted, the perineum was examined, and the anus found to be perfectly occluded. There was no corrugation of the skin at the part, and no intumescence. A crucial incision was made to the depth of half an inch, through solid parts, without reaching the rectum. As the abdomen was not distended or painful, farther operative procedure was delayed till next day, when the lower part of the bowel would be more likely to be distended. On the 19th the bowels were distended; the child suffered much from pain and straining, and meconium flowed from the urethra after the urine. The operation was performed as follows:—

"The infant was placed on the lap of the nurse, opposite the window, and held in the same manner as for the operation of lithotomy, with the shoulders low, and pelvis elevated by a cushion. An incision was made through the skin, in the exact line of the raphé, one inch in length; the incision was continued to the depth of an inch and three quarters, through the integuments, not in the axis of the pelvis, but along the concavity of the os coccygis; no vestige of the sphincter muscle or levatores ani could be seen; the substance cut through was evidently fat, with two or three nuclei-like lymphatic glands. I now introduced the index-finger of my right hand, but could not feel the distended rectum. The instrument used was a small scalpel; the edge was directed backwards.

"I continued the incision until the diminished resistance indicated that I had reached the cellular tissue: the scalpel was laid aside. On introducing my finger to the bottom of the wound, which was now as deep as the finger could reach, the rectum could be indistinctly felt. I now introduced a director, up the groove of which I passed a straight bistoury; the point was turned obliquely upwards and backwards, to avoid wounding the bladder; the director was removed and pushed a little higher, when it entered the cavity of the rectum, which there was no doubt about, as the meconium began to flow. The handle was now raised, and the blade withdrawn; the intention of raising the handle was to enlarge the internal incision. The meconium began to flow freely. Injections of warm water were now thrown up with one of Sir Charles Clarke's syringes to wash out the intestines. During the operation the child's penis became erect, and ejected *first* a clear stream of urine, then meconium. On injecting the rectum, some of the water, discoloured with meconium, flowed through the urethra. I now introduced some fine lint, smeared with *ceratum simplex*. A quantity of air passed through the new passage; the abdomen became less inflated. During the operation the exit of wind by the urethra was audible to all in the room, and made a peculiar noise."

Some hemorrhage occurred in the evening, which was easily restrained by the application of cold. Meconium passed both by the wound and urethra, and the child slept soundly, and the bleeding had ceased finally by morning. On the 21st the abdomen was distended, more meconium passing by the urethra than by the wound.

"I tried to introduce a bougie about two-eighths of an inch in diameter, and it would not pass into the rectum; I introduced my silver director, and tried to dilate the opening into the gut; some rather consistent fæces passed, but it was evident

that the internal opening was not large enough; I now passed the straight bistoury half an inch higher than before; on withdrawing the instrument, a well-formed dark evacuation, about two feet in length, passed easily; the rectum was well injected with warm gruel; bowels were well emptied; the latter part of the dejection was perfectly yellow."

On the 23rd the bowels had acted well three times since last report. No offensive matter from the urethra. A bougie, nearly an inch and a-half in circumference, anointed with cerate, was easily passed four inches and a half. A warm gruel injection was given. Urine alone flowed from the urethra after the 27th; the bowels acted regularly, and the larger bougie continued to be introduced into the rectum twice a day up to the 15th of July. It was then omitted for three days, during which the opening had contracted so much, that it was at first re-introduced with difficulty. From this time the introduction of the bougie was regularly continued twice a-day up to the 30th, when the patient was reckoned convalescent. Fungous granulations appeared at the opening, and were touched with nitrate of silver. Sponge tents had been tried two or three times instead of the bougie, but they caused pain, and were soon forced out; and Dr Hooper prefers the use of the bougie for preventing the contraction, to which there is so great a tendency.

Dr Hooper continues: "An imperforate anus has generally some preternatural outlet, either by urethra, vagina, navel, or groin. There is an extraordinary instance of such accommodation mentioned in 'Samm. Med. Wahrheiten,' b. viii. p. 29. A girl who from birth had an imperforate *anus* and *meatus urinarius*, and to the age of fourteen had regularly discharged her urine by the breasts, and her fæces by vomiting.

"Two cases of imperforate anus were communicated by Dr Keiller to the Edinburgh Obstetric Society; the first was operated on with temporary relief; in six weeks the operation was repeated thrice, when fæculent matter ceased to pass by artificial anus; it became obliterated, and the matter passed by the urethra. This ended in a complete stoppage of the fæces and urine. Death supervened. The post-mortem evinced, that at each operation the cut had been made into the urinary bladder, into which a small and imperfect gut had been found to terminate. There was no regular rectum or sigmoid flexure. In the second case the child lived twelve weeks, and evacuated the fæces by the mouth. No operation was attempted. The colon terminated in a *cul-de-sac*, which floated loosely among the intestines in the umbilical region. These cases evince that there must generally be a doubt whether you will find the rectum; therefore we cannot always expect so fortunate a result as in my case."—*Med. Times*, August 18, 1849.

342.—*Excision of the Clavicle.* By H. G. POTTER, Esq., Surgeon to the Newcastle-upon-Tyne Infirmary.—The following case is related in the *London Med. Gazette* of April 6, 1849:—"Agnes Thompson, æt. forty-two, married, and the mother of several children, was admitted into the infirmary, Sept. 21, 1848. She stated that her health was very good until about ten months ago, when she was much debilitated by continued night-watching, in consequence of illness in her family. She then felt, for the first time, rheumatic pains in the left arm, but did not notice any enlargement of the clavicle until between three and four months afterwards, when she perceived a small firm swelling about the middle of the bone. From that time the tumour has gradually increased in size, attended with lancinating pain, which is always worse at night, and prevents her from sleeping. The pain now extends down the arm, and has so impaired the use of the limb, that she is unable to perform her household duties. This pain, and consequent loss of sleep, have greatly injured her health, and she has now a very cachectic appearance.

"The middle portion of the left clavicle was much enlarged, and painful to the touch; it had a firm and inelastic feel; about an inch at each extremity was free from swelling. There was no evidence of any syphilitic taint in the system, nor did it appear that there was any hereditary tendency to disease in the family. Liniments and various other remedies had been tried, without any good effect. Leeches, and the internal use of iodide of potassium, were now tried, but no improvement took place; and, on the 31st of October, the tumour seemed even larger than it was a month before; it was also more painful.

Fearing that the disease might be malignant, and finding that the patient's health was daily becoming more impaired, Mr Potter determined to remove the bone without further loss of time. The following operation was therefore performed:—

"An incision, commencing at the sternal end of the clavicle, was continued throughout the entire length of the bone. Two other incisions were next made at

right angles to the first, at about an inch from each end, and the flaps carefully dissected back. An aneurismal needle, armed with a stout thread, made fast to the eye of a fine chain-saw, was now passed beneath the clavicle, at about half an inch from its sternal end; and the saw by this means introduced below the bone, which was then sawn through. Disarticulation of the acromial end was next effected, and a loop of string fastened to the bone, so as to raise it up while the remaining portion was separated from its attachments. No vessel of consequence was wounded, and no ligature was required. On examining the bone after removal, the disease was found to be caries, which had extensively affected the under surface. It was also found that the whole of the diseased portion had been taken away. About half an inch of the sternal end was left attached to the sternum. No pain was felt during the operation, chloroform having been administered with perfect success. The lips of the wound were brought together with sutures and straps of plaster, over which lint, dipped in cold water, and a bandage, were applied. The arm was also properly secured to the side. The patient rapidly recovered, and left the infirmary in a month. On the 15th March, she was in a condition to go through her household duties, and felt her arm becoming every day stronger. There was no sinking of the shoulder, and, except when closely examined, no appearance of disfigurement.

[This is at least the third case in which nearly the entire clavicle has been removed. Previous to this the inner and outer thirds of the bone had been removed; the former by Mr Davies, in a case related by Sir A. Cooper, in which the bone had become gradually displaced backwards, so as to interfere with the œsophagus; the latter by Velpeau, for necrosis. A case is related by S. Cooper, in which Dr Mott of New York removed nearly all the clavicle, on account of a large osteo-sarcoma, a small part only at the acromial end having been left; and Mr Syme has related a case (Pathology and Practice of Surgery), in which he removed a similar extent of the bone on account of a tumour, involving the greater part of its length, the acromial end of the bone, to the extent of an inch, being purposely left with the view of causing less injury to the connections of the shoulder. Mr Syme remarks—"The only part of the operation in the slightest degree difficult or embarrassing, was in separating the large articular surface of the bone from its connections, where the vicinity of the pleura and venous trunk rendered extreme caution requisite."

In Mr Potter's case no ligature was required. In Mr Syme's three small vessels were tied. In Dr Mott's forty ligatures were applied, and the external and internal jugular veins were tied and divided. All the patients did well.]

343.—*Paralysis of the Bladder cured by Galvanism.*—An interesting case of this kind recently occurred in the practice of M. Monod, surgeon to the Maison de Santé. A woman, fifty-seven years of age, labouring under an incurable disease, endeavoured to commit suicide by means of charcoal fumes. She was relieved in time, but an obstinate paralysis of the bladder remained. M. Monod suggested a trial of galvanism to the neck and fundus of the bladder. On the first application the patient was enabled to make water without assistance, and her recovery was rapid.—*Med. Times*, July 14, 1849.

III.—MIDWIFERY, AND DISEASES PECULIAR TO WOMEN.

344.—*Case of Twins of Extraordinary Size.* By Dr Bertolet, of Oley, Pennsylvania.—"Early on the morning of the 15th of April 1848, I was requested to meet Dr Thompson in consultation, at five o'clock, in the following case:—

"Mrs A. H., in her sixth labour, was seized with regular pains at ten o'clock on the previous morning, and at two o'clock, after having been in labour four hours, was delivered of a fine vigorous female child. The vertex presented to the left acetabulum, and the infant, after it was born, weighed *nine and a-half pounds*. The labour pains then ceased for a time, but soon recurred with increased violence. Upon examination, the right hand of another child was discovered high up in the vagina; this was returned within the uterus, after which the vertex presented very nicely in the second position at the posterior strait. We now had hopes that all further assistance would be unnecessary; but after waiting for a considerable time, the head still continued in exactly the same situation. There had been a constant flow of blood from the time the first child was born, and the patient's strength was becoming exhausted. I succeeded in applying the *long forceps* after

some difficulty, and soon delivered the lady of a male child of unusual size; it was still-born, and weighed *eleven and a quarter pounds*—making an aggregate weight of twenty and three-quarter pounds contained in the uterus beside the secundines.

"After the second delivery, the hemorrhage ceased, and no unpleasant symptom occurred to retard the quick recovery of the patient. Both mother and child are now perfectly well.

"Mrs H. has had, previously to the above, five natural labours, and two abortions, immediately preceding her last accouchement. All this took place within twelve years; if she had been safely delivered at full term in all these cases, therefore, she would have had nine children."—*Phil. Med. Examiner.*

345.—*Superfœtation and Mixed Births.*—Dr Thomas B. Taylor relates the following as a case of superfœtation. Clarissa, a negress, the property of Mr A. Knox, aged about thirty-five years, in May last was delivered of twins; one a mulatto and the other a negro child. She had been married to a negro man on the plantation, of delicate constitution, for many years, and had several children by him. Her menstrual discharge had occurred for several months previous to her pregnancy, at about the full of the moon. She felt herself pregnant by her customary signs, about the middle of the month; and, to confirm her suspicion, at the next period it did not appear. About three weeks from the time she first felt she had conceived, and one week after her menses had failed to appear, she had sexual intercourse *once* with a white man. She slept with her husband every night—had connection with him the night before she had intercourse with the white man, but not on the same night. At their birth, the mulatto child bore marks of being at least three weeks younger than the negro; thus sustaining the woman in her suppositions as to the time between her two conceptions. This woman is a faithful servant, and I have every reason to believe she told the truth, in relating the circumstances of her case to me."—*American Journal of the Medical Sciences*, 1849.

346.—*Obesity, simulating Pregnancy. Caution in the Diagnosis of Pregnancy.* By Dr Leopold Schönburgh.—Mrs ——, whose husband had been separated from her by imprisonment upwards of three months, after exposure to cold, experienced all the symptoms of pregnancy. She was a modest and virtuous woman, and believed herself to have been three months pregnant. In about eight weeks more she believed she felt the movements of the child; the abdomen continued to increase in size proportionably. At the end of nine months her abdomen presented the appearance of the full period of gestation, but she had not felt the supposed fœtal movements for several weeks. The catamenia now returned regularly at each month; her health was good, and the size of the abdomen again decreased to the size of about five months' pregnancy. The umbilicus was depressed, the parietes felt doughy, free from fluctuation, the hands could be pressed below them four or five inches downwards towards the spine, and could be made to meet together beneath the fat integuments; the uterus could be felt somewhat enlarged in the hypogastric region. On examination per vaginam, the os uteri could be readily reached; it was soft, and seemed swollen; two lateral cicatrices could be perceived on its surface. The cervix uteri was rather more than half an inch in length. The posterior wall was soft and rather tender; pressure on the abdomen could be felt to depress this organ. The mucous membrane of the vagina did not present a bluish, but the ordinary red colour.

It was clear that no pregnancy existed in this case, but that the suppression of the catamenia by cold had given rise to the rapid development of fat, and congestion of the pelvic viscera, with the consequent enlargement of the abdomen.—*Casper's Wochenschrift*, March 1849.

347.—*Effects of the Moral Treatment of Hysterical Fits.*—A young lady, who had met with a very severe disappointment, was placed under our care. She was twenty-three years of age, and hereditarily predisposed to the disease on both sides. It manifested itself by an excited state of mind, with startings and restlessness, and she had frequent hysterical fits. Every attention had been paid to her health before she quitted home, but having attempted to throw herself out of the window, it was deemed proper to remove her from the scene of her excitement. She was cheerful and clever, and very susceptible of admiration. When she first came, she stated that her fits were so frequent that it was not right for her to go to church; but as they were really not violent we observed to her that it was always the rule of the house to go to church, and that if the fit came on there, we should be obliged to call for the assistance of the beadle to take her out; and that she would thus make herself very con-

spicuous. After the service of the first Sunday, she observed, on coming home from church, that she was very nearly attacked indeed; and it was remarkable that she never had any fit at these times afterwards. We took courage from this, and hoped the time would come when the fits would disappear, not only at church, but altogether, by a similar method of treatment. One day, while at dinner, her knife and fork dropped suddenly into her plate, and she was simultaneously upon the floor. There were several at the table, and the servant was requested to give no heed to the lady. After a few minutes had passed away, a gentleman who was at the table, whose pharmaceutical knowledge would never make his fortune, feeling a little nervous about the issue of the case, rather anxiously suggested that she should have some *Epsom* salts—meaning, no doubt, to say smelling salts, given to her. This was quite enough. She laughed very much, and resumed her place at the table, and all went on as before. And it is very pleasing to be able to add, that for the few months longer she remained with us, she experienced no return of the fits either at church or at home; her irritability and oddness of manner went off, and she continued well. This is now eighteen years ago, and there has been no actual return of the threatened malady, though she has been extremely nervous at times, many sorrows and trials having attended her. If these fits had been neglected or encouraged by bad management at the first, the probability is she would, with all the predisposing circumstances of the case, have been the subject of insanity at the present time.—*Dr Burnett on Insanity.*

IV.—PSYCHOLOGICAL MEDICINE.

348.—*Prevention of Insanity.*—In addition to the avoidance of all the causes of insanity which have already been mentioned, the prevention of the disease must be sought in measures calculated to prevent re-attacks, and also its development in those hereditarily predisposed to it. Under the same head of prevention, we also wish to include means for arresting the disease in its incipient stage, and for this purpose it will be well to understand that insanity often commences in a very insidious manner.

Some appear to be deranged only as regards their feelings or moral qualities. They are noticed to be different from what they formerly were; to be more restless and sleepless, or unnaturally morose and irritable. Some manifest an unfounded dread of evil, say but little, shun society, and are suspicious of their dearest friends and relatives; while others are unusually vivacious and pleasant, or quarrelsome and abusive. Such changes of character and habits will usually be found to be subsequent to some reverse of fortune, loss of friends, or sickness, and should excite alarm. Persons thus affected will converse rationally, and in company or before strangers will conceal their peculiarities, and thus are known to be insane but to a very few, until some violent act leads to an investigation, and then it is found they have long been partially deranged. This is the case with most of those who commit suicide. They are known to be melancholy, and a little insane, by their nearest friends, who, however, often conceal the fact until after the catastrophe.

Often insanity exists in a slight degree for months, and, as we have said, is only noticed by the most intimate friends or relatives, and then *suddenly* assumes an alarming form, leading in some instances to homicide, and in others to self-destruction. Of the latter, almost every newspaper contains accounts, and of the former we have known many instances.

A considerable number of cases have fallen under our observation of mothers killing their own children. In most of these cases, the insanity previous to the act, though known to exist, was slight, and no particular danger was apprehended. In some of these instances the act seemed to have been committed from a sudden impulse; in others, it was premeditated, and done for the purpose of securing the happiness of the child; and also, in one instance, to procure the death, by execution, of its mother, who wished not to live, but was unwilling to commit suicide. Contrary to our expectations, several of these cases have recovered, and been well and with their friends a number of years. Two of them have since become mothers, and still continue to enjoy good health.

Such deplorable occurrences make known to us, not only the extreme danger of permitting the insane to be left unguarded in families, and to have the management of children, but also the almost criminal neglect of their guardians, in not endeavour-

ing to effect their restoration in the early period of the disease. A kind and affectionate mother, who, in a paroxysm of insanity, killed two of her children when left alone with them, has recently been admitted into this asylum. She is now apparently sane most of the time, and has a clear recollection of what she has done. In a recent letter to her friends she says: "Had I been brought to the asylum last year, when I ought to have been, I might now be at home and happy with all my dear children."

The suicidal form of insanity often exists in a slight degree for a long time, but unfortunately attracts little or no attention; and hence the frequency of suicide, which in this State has become truly alarming.

Surely all must see the urgent necessity of attention to the first symptoms of mental derangement, especially when accompanied by gloom and despondency, or consequent upon misfortune, loss of relatives, or sickness. In such cases, even when the mental disorder is slight, the friends should be as anxious and ready to seek a remedy, as in attacks of other diseases. Often the advice of a judicious physician, with a little medicine, with change of business, or a journey, will effect a cure.

The *recurrence of insanity* might often be prevented by proper care. This fact we consider it important for the community to know, and also that *re-attacks* are very common. We are often surprised at the apparent thoughtlessness of the friends of the insane, and their neglect of the precautions necessary to prevent a relapse. Thus, not unfrequently, those who have here recovered are returned to their homes in a manner likely to injure them,—exposed to cold, and to excessive fatigue by riding too far in one day, and by being deprived of their rest by journeying in the night. Some are permitted to recur to those habits and practices that are known to cause or perpetuate the disease from which they have just recovered; such as the use of stimulating drinks, the excessive use of snuff, tobacco, or strong tea. Others are permitted to attend and take part in exciting political and religious meetings, and to be out late at night.

In this connection we shall be pardoned for respectfully mentioning our apprehension that the study of insanity is too much neglected by physicians engaged in general practice. We have no hesitation in saying, that if the physicians of the country were fully aware of the importance of this subject, and would as thoroughly study insanity as they do other diseases, and exert themselves to prevent by timely advice, and to arrest it in its early stage, that they would do those predisposed to insanity, and the insane themselves, an amount of good unequalled by that of the asylums of the country. They should understand and be able to recognise its earliest symptoms; for, as has been said, insanity often, and we believe we may say most generally, exists in a slight and scarcely perceptible degree for months before it is generally noticed. They should know how liable many are to this disease from hereditary predisposition, from previous attacks, long-continued menorrhagia, or other diseases; from repelled eruptions, and extreme nervous susceptibility; and be able to advise such, and warn them in time of impending danger. How many cases of puerperal insanity, or of that insanity that comes on after childbirth, might be prevented by timely precautions, by quieting the fears of the timid and desponding; by such advice and suggestions to those who are about to become mothers, and to their husbands and friends, as will prevent the occurrence of any sudden or severe disappointments during, or soon after, travail. Those predisposed to insanity, or who have suffered from a previous attack, should be particularly advised and guarded. When, however, insanity does supervene, as it frequently does after childbirth, it may often be remedied by proper treatment without the removal of the patient from home; and as this is a matter of great importance, we beg leave to suggest to medical men the importance of thoroughly studying it. One of the best, as well as most recent articles on puerperal insanity which we have seen, is that by Dr MacDonald, in the *American Journal of Insanity* for October 1847. It is well worthy of attentive perusal by all engaged in the practice of the medical profession. — *Report of the New York State Lunatic Asylum.*

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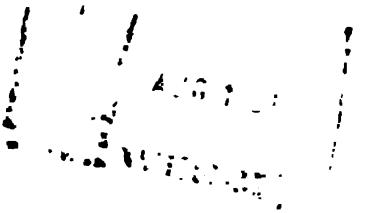
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